Business Evolving in the Information Age

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Action!

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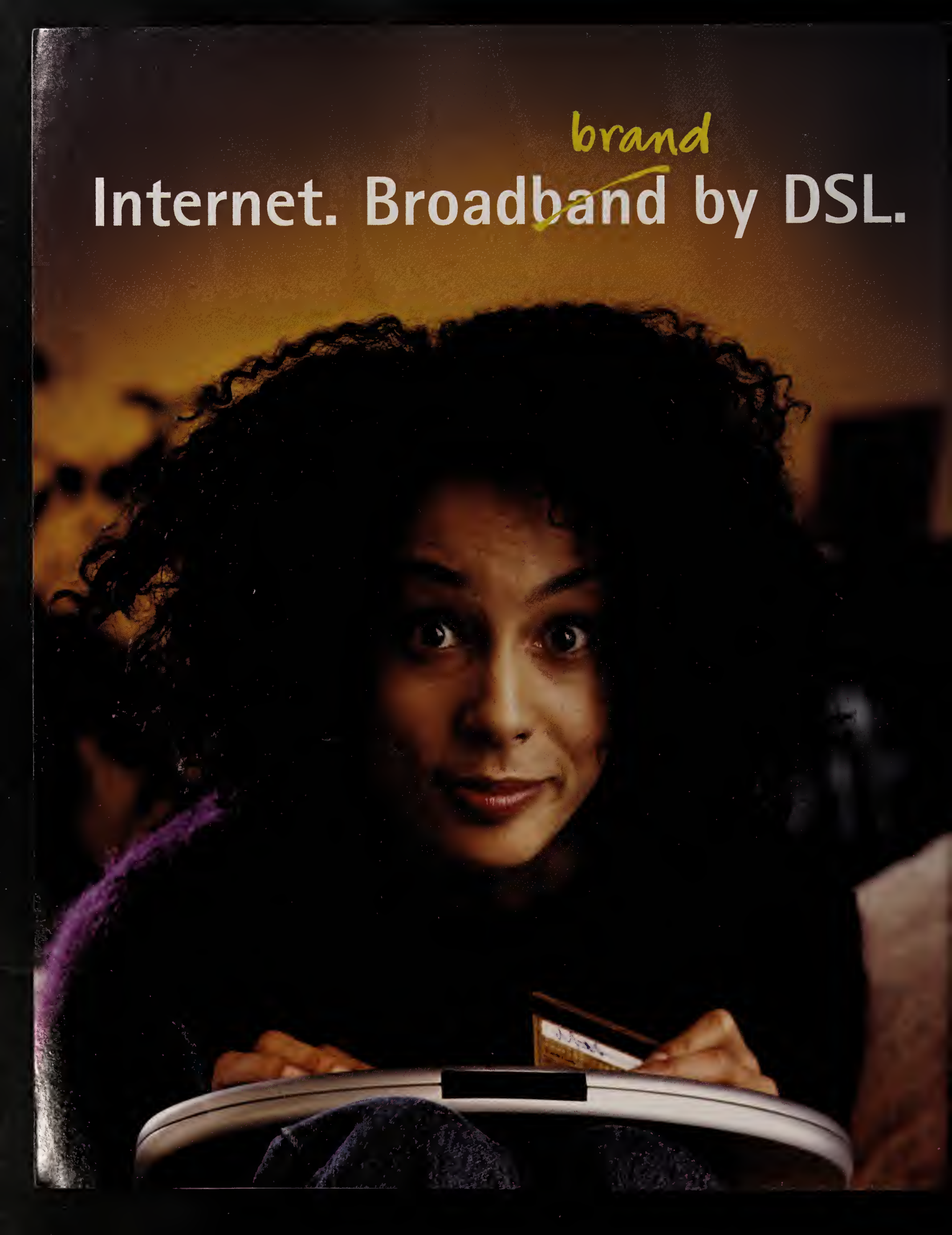
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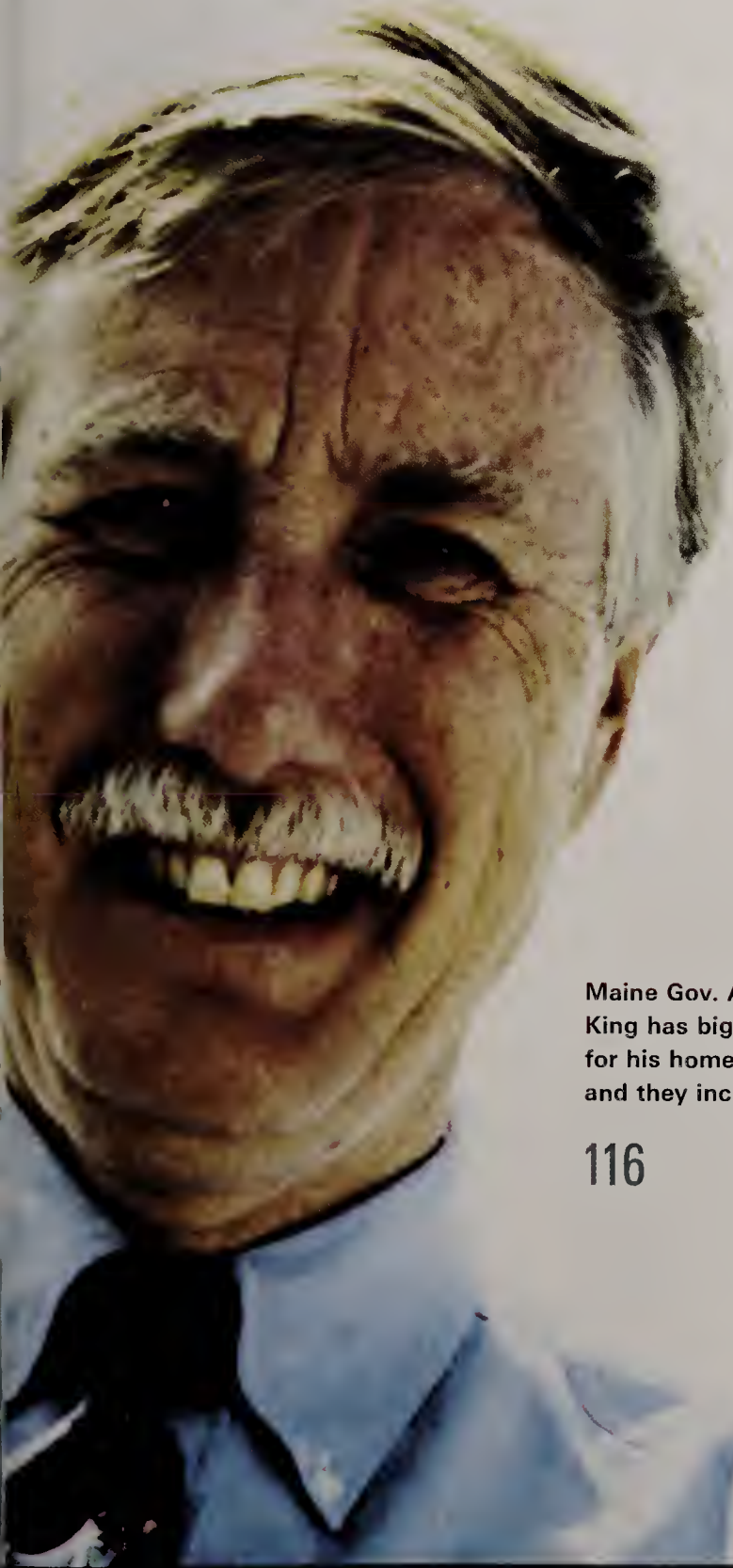

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On the cover: Actor Ben Affleck talks about how technology is changing the film industry. Photo by Furnald/Gray.

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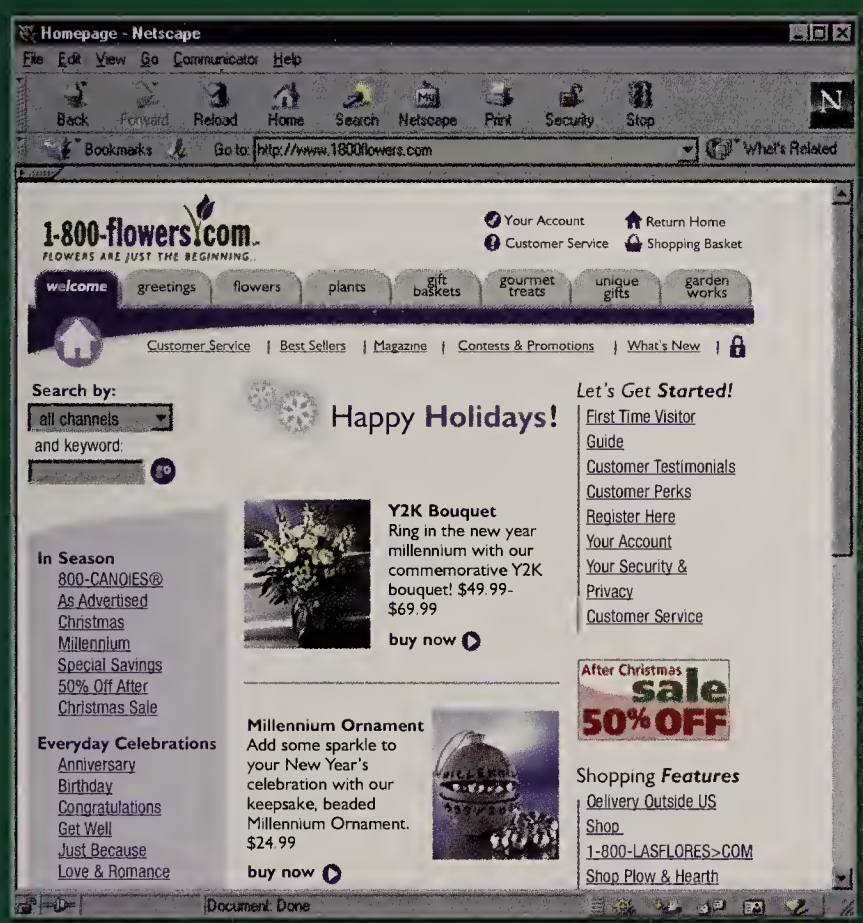

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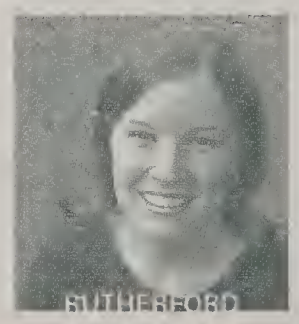

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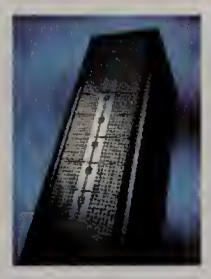

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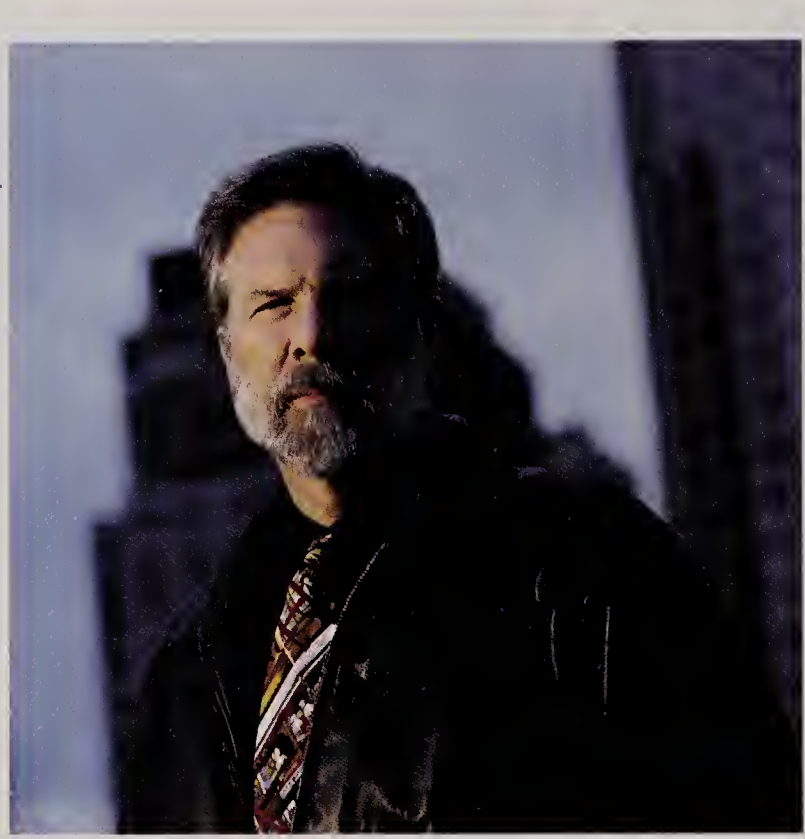

Surviving Devolution

Television is the fount of all interesting new ideas and social trends. And this summer, the season of survival is on us. We have that show on CBS where people get ruthlessly written out of the script by their fellow cast members. It's TV's own version of capital punishment. Earlier in the summer there was *The 1900 House.* Four hundred eager British families competed for the honor of spending three months at 50 Elliscombe Road in London, a kind of atavistic hell where every daily activity and all the accoutrements of life were painstakingly restored to Victorian Era authenticity.

The Bowler family—"winners" of this competition—bore their confinement harshly. At first, nothing in the house quite worked (except for the inmates, of course, and they chored ceaselessly). Hygiene was an issue, bodily funk the norm. Laundry could be an all-day entertainment. The stove was a potentially explosive mystery. And "mind-numbing boredom" became the slow-ticking scourge of the Bowler family's understimulated cortexes.

Anyhow, this all got me thinking. Who among our readers would happily volunteer—even compete—for the honor of working in The 1960 Office?

We're building it now, lovingly re-creating it down to the last detail. A big I.M. Pei glass tower just glinting with organizational majesty, chock-full of state-of-the-art technology. The first Xerox office photocopier was introduced in 1958, so you can bet that The 1960 Office has one. Maybe not two, though. It's a good-sized novelty, somewhat intimidating to use (eventually, central copying rooms and departments will spring up to serve enterprise duplication needs, but in 1960 it's not yet obvious that copying is an activity as much as an amazing curiosity). The Xerox machine is far outnumbered by typewriters (some of them now running on electricity!) with multiple sheets of carbon paper assuring smudgy-looking copies of all important correspondence.

In some quarters, the e-mail equivalent is an intricate system of pneumatic tubes capable of ferrying workflow in cool plastic capsules from the executive reaches down to middle management and, eventually, to the shop floor. In other cases, it's the telephone. Magda can put your call through as soon as her polish dries.

Hierarchy is a big deal in The 1960 Office. Special parking, cafeteria, elevator and rest room facilities are maintained for the exalted leadership classes. And no one even feels guilty about it. Empowerment is freely available only to the biggest of the big dogs. Everyone else needs escalating layers of permission.

Men of course wear hats to work, blue or charcoal suits, and white shirts with boring ties. Women wear smart cotton suits (wool in winter) and happily fetch coffee. Hardly any of the women are bosses. In The 1960 Office, it's great to be a guy.

So, who wants to volunteer to survive for a month in The 1960 Office? The toughest part will be to compete with rivals who are 40 years more advanced. But in 1960, at least, being profitable wasn't a controversial business requirement.

Are you ready to devolve? Let me know at *mccreary@darwinmag.com*.

Lew McCreary
Editor in Chief

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Coping with Loss

The problem of losing stuff begins at an early age. ("Listen, mister, you're not going anywhere until you pick up every bit of this mess and put it all back where it belongs!") The binoculars that came with GI Joe, the string that powers the gyroscope, the ejectable plastic canopy for the scale-model F-16, those really nice pink faux patent leather Barbie shoes (just kidding)....

And it only gets worse. Over time, the necessary equipment that keeps our childhood factories humming is transformed into the gnarly bits and pieces of personal business infrastructure for which we are accountable—from laptop phone cords to Palm Pilots to, um, top-secret disk drives. Decades later, we find ourselves still faced with this very same challenge: finding the lost stuff before we get yelled at. (And, remember: Almost nothing is actually lost; everything is somewhere.)

Imagine the problem of loss multiplied out to the enterprise level. According to Maureen McCann, director of outbound marketing for iVita (*www.ivita.com*), a Houston-based application service provider in the "asset-management optimization" arena (basically, asset management is what your mother was getting at when she made you clean up your room), here are some business toys that get lost: oil rigs, airline baggage trucks, heavy construction equipment, hospital IV pumps and radiology gear. McCann says there's a hospital in New York that's even begun putting electronic tags on doctors and nurses just like the ones they put on gurneys and other expensive medical paraphernalia.

But a lot of stuff gets "lost" simply because it gets replaced. Something new and better comes along and elbows it aside. *Darwin* Editor in Chief Lew McCreary tells me he has a 20-pound Toshiba "laptop" computer sitting in a case in the corner of his office that hasn't been used in more than a decade. Besides Lew, nobody knows or cares that it's there. And yet, it still works just fine. It isn't missed because it's already been replaced—three times.

Hardly anything gets replaced more often than computers. New Deal (*www.newdealinc.com*), a Somerville, Mass.-based company founded on an assortment of environmentally and socially responsible missions (attacking the digital divide, uncluttering overburdened landfills, providing democratic access to the Internet), aims to resurrect older-generation PCs into sleek, high-performing, Net-ready sportsters. The startup "second-harvests" these machines and rejuvenates them with an efficient, intuitive operating system and office suite it has developed. Basically, the company injects new DNA into the moribund corpses of discarded technology. Their "GreenPCs" retail for between $50 and $100 and include free Internet access.

We think New Deal's founder, Clive Smith, should get in touch with Maureen McCann. She could definitely lead him to a ready supply of evolvable technology. Because nothing is ever really lost.

Let us know if you have something that's past its prime. E-mail me at *genovese@darwinmag.com*.

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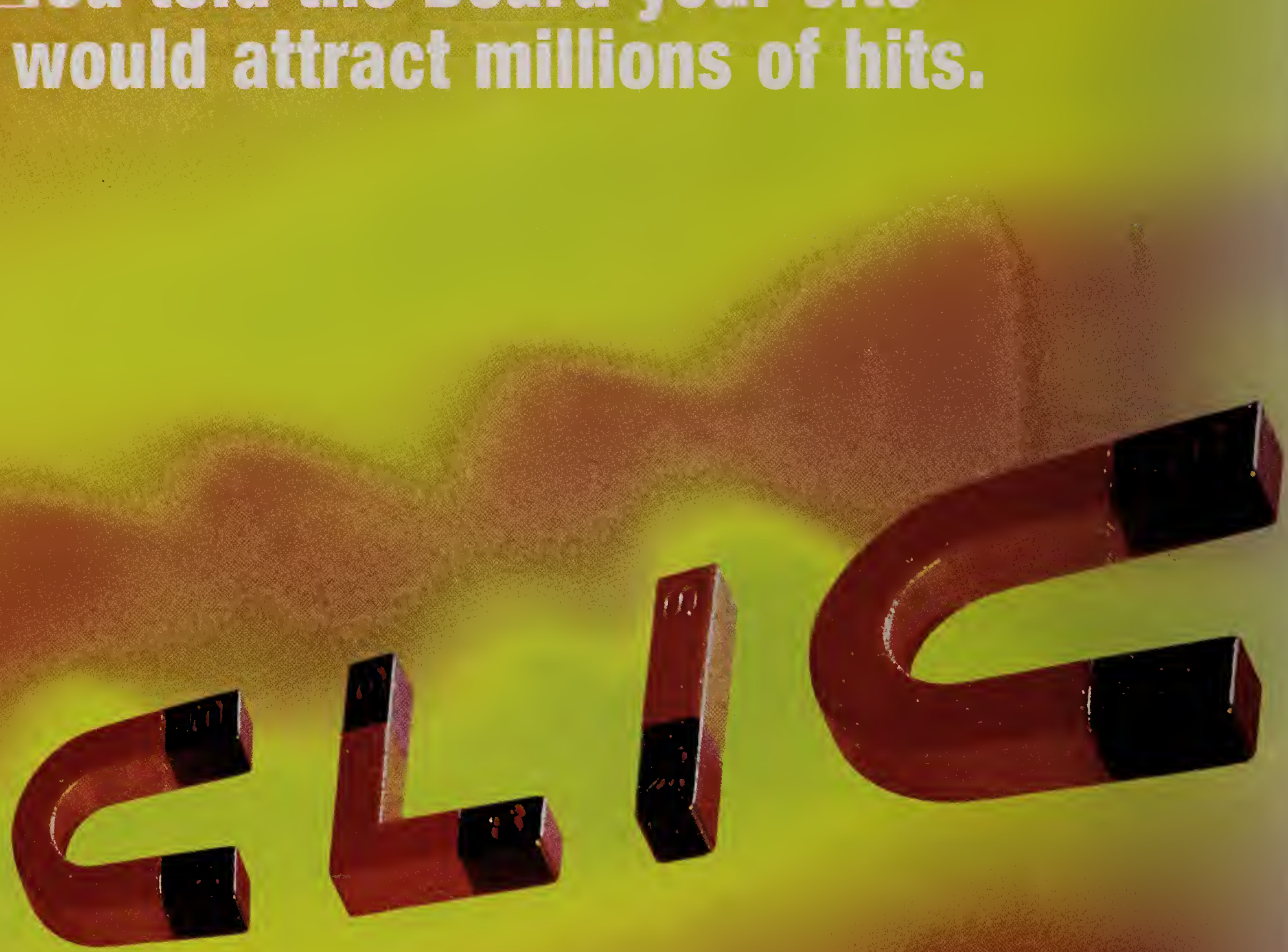

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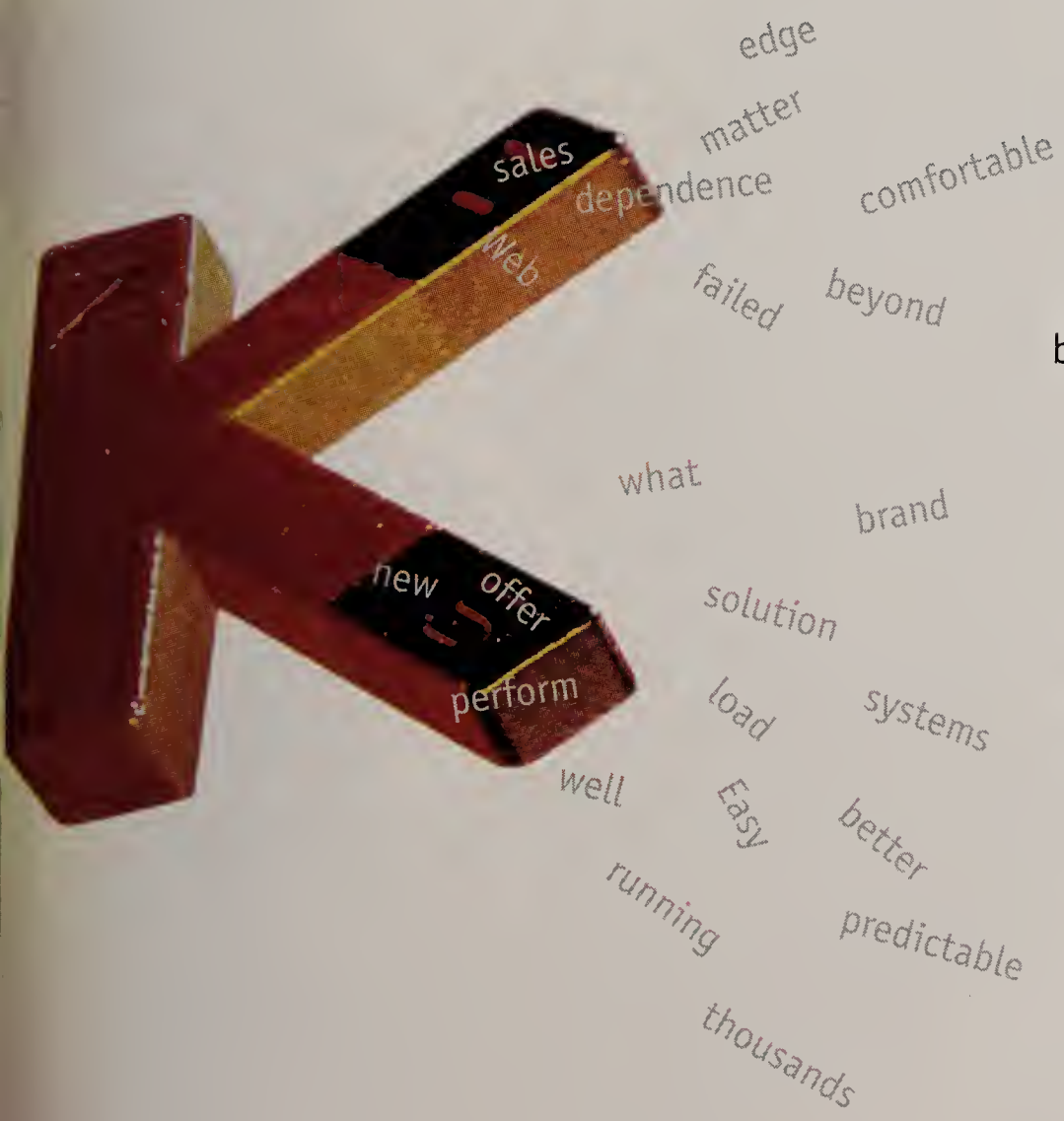

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buz

NEWS, VIEWS AND THE HUM OF BUSINESS

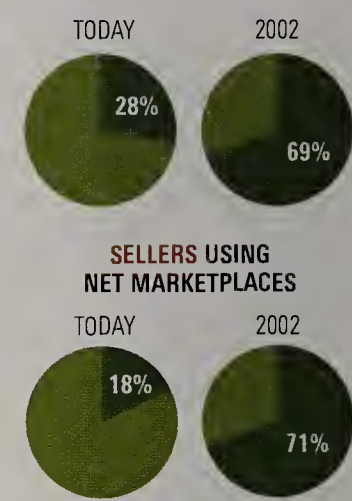
Edited by Todd Datz

B2BHype.com

ONLINE REALITY Just about every company but yours has signed on to one of these new business-to-business marketplaces, right? And they're all reaping the benefits of efficient online purchasing and seamless communication with their suppliers, aren't they? Guess again. Contrary to the hype, Forrester Research found that 77 percent of the 80 companies it surveyed earlier this year had yet to do one whit of trade via an online marketplace. By 2002, 47 percent of those surveyed expect to do up to half of their trade via online marketplaces, and 23 percent expect to do more than half. But 30 percent still don't expect to use marketplaces at all.

Why are so few businesses actually doing any business via online marketplaces? Some are worried about the ways marketplaces will disrupt their business—sellers fearing that margins will be slashed, buyers fearing that they will lose face-to-face contact with suppliers. But Forrester Research Director **Laurie Orlov** says a bigger problem may be that many of today's startup marketplaces have yet to offer transaction capabilities or the logistics and financial services needed to complete online deals. Instead, they've been more focused on community building, that is, helping buyers meet suppliers online, who then conduct their business the old-fashioned way—offline.

VC money and Wall Street have fueled much of the B2B hype (and even they have cooled a bit on the sector). But companies can truly become more efficient if they buy and sell goods online, Orlov says. The efficiencies of a network increase with the number of participants, and no one wants to be left out, so businesses will soon overcome their fears and sign on. "Some people call it 'the network effect,'" Orlov says, explaining the momentum behind B2B. "The more cynical side of me calls it the lemming effect." *–Sari Kalin*



SOURCE: "EMARKETPLACES BOOST B-TO-B TRADE," A 2000 FORRESTER RESEARCH SURVEY OF 80 COMPANIES

The Darwin Meter

EVOLVING	UNEVOLVING
high-tech CEOs	consumer product CEOs
disruptive innovation	incremental innovation
overpriced sports stadiums	game attendance
bank mergers	bank tellers
DaimlerChrysler's PT Cruiser	DaimlerChrysler's Neon
software viruses	opening e-mail attachments
Thomas Penfield Jackson	Michael Jackson
Krispy Kreme doughnuts	Dunkin' Donuts
Dennis Rodman's body rings	Dennis Rodman's career

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jaron lanier

A RENAISSANCE TECHNOLOGY MAN WANTS US TO SEE—AND FEEL—THE FUTURE

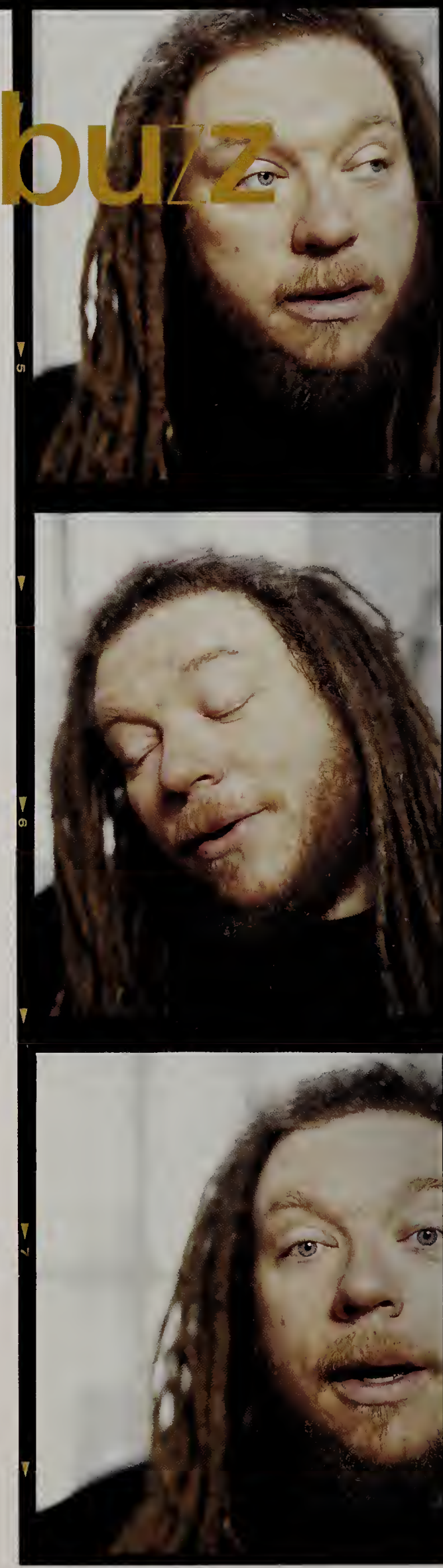
When Jaron Lanier coined the term "virtual reality" in the early '80s, the idea behind it—donning special goggles and gloves that allow a user to see and touch a computer-generated world—seemed too Star Trekish to have practical application. In the past 20 years, public and corporate interest in the technology has waned. But Lanier—musician, filmmaker and consultant to Fortune 500 companies—is still shouting down those who would call it a fad, arguing that, in the not-too-distant future, virtual reality will become a fundamental tool for human communication.

Lanier was only 24 years old in 1984 when his company, VPL Research, the first company to sell virtual reality (VR) products commercially, was incorporated. He created the first avatars (computer-generated icons representing the VR user) and the first networked virtual worlds for them to inhabit. Lanier cocreated the first surgical simulators and made the first virtual sets for television and movie production. Unlike many inventors who get bogged down in the bits and bytes, Lanier's focus on VR has allowed him to follow an array of intellectual interests and to become somewhat of a Renaissance technologist. "Of all the things one could choose to work on, VR is perhaps the best centered in the whole of human intellectual activity," says Lanier. "It connects directly to everything. It connects to the arts, to science, to medicine, to philosophy. It's a particularly rich thing to be involved in."

Lanier left VPL in 1992 and the company was subsequently acquired by Sun Microsystems, but his interest in VR and its socioeconomic promise persists. Lanier is now the lead scientist for the National Tele-immersion Initiative, a next-generation Internet application that is a cross between VR and a transporter booth. Anticipating the enormous bandwidth and computing power of the future, tele-immersion will let people in different locations interact with each other in a virtual environment that mirrors the real world.

For example, an architect in Boston would be able to meet with a client in San Francisco as if they were in the same room. They would be able to interact verbally and physically, even to the point of huddling together over the architect's drawing board and working on the same blueprint.

"It will simply be the way people connect when they're not in the same room," he says. "It is the future of the telephone, and its competition is airlines."



Lanier, at the ripe young age of 40, is in the enviable position of having years ahead of him to see if his predictions come true.

–Daintry Duffy

PHOTO BY MARK VAN S

eBusiness for a customer-driven world.

a recent study shows that when you

CODDLE YOUR CUSTOMERS,

IT'S YOUR SHAREHOLDERS WHO FEEL ALL

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Nurturing customers not only pays off, it pays off in a hurry.

As the chart below indicates, the shareholders of companies that use Siebel *e*Business Applications and services to improve their customer relationships have seen their investments grow larger and faster than the market as a whole. Obviously, no one can predict the market – but the fact is that overall, between January 1995 and December 1999, companies who made significant investments in Siebel *e*Business Applications outperformed leading market indicators such as the Standard & Poor's 500 index by a stunning 85%.[1]

This is no fluke. An independent study of companies using Siebel *e*Business Applications found that customer satisfaction increased by 21%, revenue growth increased by 15% and employee productivity increased by 20%, with full payback on their Siebel investment in 10 months.[2] The natural conclusion: when your customers are satisfied, your shareholders will be gratified.

You must be able to communicate with your customers by phone, by fax, by PDA, by email or beeper – any way they choose.

Of course, it's easy to pay lip service to customer satisfaction and most companies do, but putting it into practice takes an experienced, proven partner like Siebel.

Siebel *e*Business Applications deliver increased customer satisfaction, increased revenues, and increased employee productivity for more organizations, in more industries, in more places around the world.

We coddle our customers. They coddle their shareholders.

FOR MORE INFORMATION, VISIT US AT
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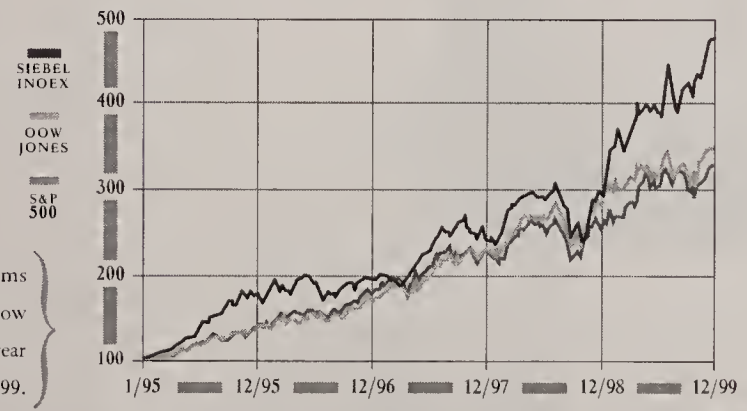

Companies who invested in Siebel Systems technology consistently outperformed both the Dow Jones Industrial Average and the S&P 500 over a four-year period, from January 1995 to December 1999.

mention code **102900**

SIEBEL
eBusiness

SAN MATEO CHICAGO NEW YORK LONDON TORONTO SYDNEY PARIS MUNICH TOKYO HONG KONG MEXICO CITY SAO PAULO

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Technogirls

CLOSING THE GAP Seems like everyone—from politicians to understaffed CIOs—is talking about the Digital Divide. To help narrow the gap, 3Com and the YWCA are jointly sponsoring two programs called Connected Entrepreneur and NetPrep GYRLS. Unveiled in April, the goal of the programs is to introduce technology to young women who might not otherwise get a chance to learn about it. For NetPrep GYRLS, 3Com donates office networking equipment to a local YWCA, where girls can go to learn computer skills. For the Connected Entrepreneur program, 3Com donates equipment to small businesses that have offered mentoring programs to underserved communities. Program participants can then intern at those businesses.

The first recipient of the Connected Entrepreneur Award is C&C Films, run by husband-and-wife team **Steve** and **Sheila Conner.** The company, which helped create a new (and now rather annoying) national buzzword with its production of the Budweiser "Wassup?"

ads, employs technology throughout its business. Since its creation in 1995, the Brooklyn-based company has sponsored an extensive internship program. Its recognition as a Connected Entrepreneur means that it will be able to extend more of those opportunities to local young women. Most of them come in with very little exposure to technology. "But they come in with a lot of heart and a lot of interest," says Steve Conner.

–Meg Mitchell

Doctor, Doctor, Give Me the Cash

Senior Editor Todd Datz received this e-mail earlier this year (in fact, many of you may have too). Datz's comments appear in **bold**—the e-mail is in its original wording. He asks that readers, especially life insurance agents, don't flood his e-mail box with requests for monetary gifts, loans or variable life quotes.

PRIVATE BUSINESS PROPOSAL
Dr. Kareem Salami
No. 16 Kingsway Road
Ikoyi, Lagos, Nigeria
Tel/Fax: 234-1-7747907
26th March, 2000

First I must solicit your confidence in this transaction. This is by virtue of its nature as being utterly confidential and top secret. **[Absolutely, no questions asked.]**

We are top officials of the Federal Government Contract Review Panel who are interested in importation of goods into our country with funds which are presently trapped in Nigeria. In order to commence this business we solicit your assistance to enable us RECIEVE [sic] the said trapped funds ABROAD. **[Glad to help. It will alleviate my guilt for not doing a Peace Corps gig after undergrad.]**

The source of this fund is as follows: During the regime of our late head of state, Gen. Sani Abacha, the government officials set up companies and awarded themselves contracts which were grossly over-invoiced in various Ministries. The NEW CIVILIAN Government set up a Contract Review Panel (C.R.P) **[Might it be the Contract Review Assistance Panel (CRAP)?]** and we have

ILLUSTRATION BY FRED RIX; PHOTO BY GETTYONE

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This helps explain why overall, between January 1995 and December 1999, companies who made significant investments in Siebel *e*Business Applications outperformed leading market indicators such as the Standard & Poor's 500 index by a stunning 85%.[2]

At Siebel, we make the applications that companies need to succeed in today's ruthlessly competitive, customer-driven eBusiness environment.

The most valuable asset any business can have is the loyalty of its customers – since it can cost up to 12 times more to replace a customer than it does to keep one. But keeping customers loyal isn't as easy as it used to be.

Customers want to do business anytime, anywhere, in any language, in any currency, and through any communications channel they choose. Whether they're ordering over the Web, connecting to a call center, buying at retail or talking to a service rep in the field. Clearly, in this multichannel environment, customers rule.

That's why you need applications that can give everyone in your organization access to the same real time information – so no matter where or with whom customers interact, they feel as if they are having one continuous uninterrupted conversation.

Siebel *e*Business Applications deliver customer satisfaction for more organizations in more industries in more places around the world. It's a brutally competitive world out there. But it really pays to be nice.

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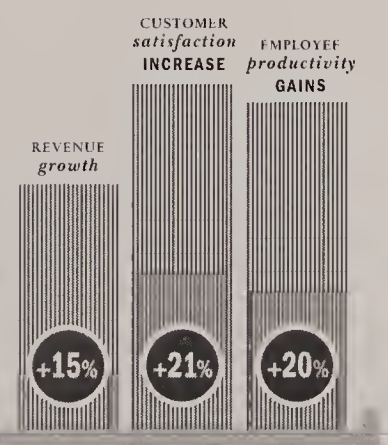
In a major study, Siebel solutions helped increase revenue by 15%, customer satisfaction by 21% and employee productivity by 20%. Which makes for happy shareholders. And not-so-happy competitors.



mention code **102901**

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Accelerate processes

Integrate suppliers

Customize sales

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Embrace customers

Streamline inventory

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identified a lot of inflated contract funds which are presently floating in the Central Bank of Nigeria (C.B.N). However, due to our position as civil servants and members of this panel, we cannot acquire this money in our names.**[But why couldn't CRAP, er, CRP, acquire the money in its name? Sorry, don't mean to pry.]** I have therefore, been delegated as a matter of trust by my colleagues of the panel to look for an Overseas partner **[Me?]** INTO whose ACCOUNT the sum of US$31,000,000.00 (Thirty-one Million United States Dollars) WILL BE PAID BY TELEGRAPHIC TRANSFER. **[Holy Mama! Check it out, Regis!]**

We have agreed to share the money thus: 70% for us (the officials) **[seems fair]** 20% for the FOREIGN PARTNER (you) **[Let's see, that's a cool $6.2 million—ooh baby, I'm RICH! Gonna get me a new Weber grill with 44,000 BTUs and take the wife and kids to the Poconos.]** 10% to be used in settling taxation and all local and foreign expenses. **[Sure kicks U.S. tax-rate butt. I love you Kareem! (May I call you Kareem?)]**

It is from this 70% that we wish to commence the importation business. Please note that this transaction is 100% safe **[Hey, if it was being transacted over the Internet, I'd be scared, but I trust you.]** and we hope THAT THE FUNDS CAN ARRIVE IN YOUR ACCOUNT in latest ten (10) banking days from the date of reciept [sic] of the following information by TEL/FAX: 234-1-7747907: A SUITABLE NAME AND BANK ACCOUNT INTO WHICH THE FUNDS CAN BE PAID. PLEASE ENDEAVOUR TO RESPOND BY TELEPHONE OR FAX. **[Hmm... it's an expensive phone call, but I'll reimburse the company.]**

The above information will enable us to write letters of claim and job description respectively. This way we will use your company's name to apply for payments and re-award the contract in your company name. **[Darn, I don't want to get *Darwin* involved in this—after all, this e-mail was sent to me. Guess I'll make me up a company name: Datz Imports/Exports Inc.: My Bank Account Is Your Bank Account.]**

We are looking forward to doing business with you and solicit your confidentiality in this transaction. **[Yup, already agreed to keep my lips zipped. (Kareem-Man, that's an American cliché for shutting my trap.)]**

Please acknowledge receipt of this letter using the above Tel/Fax number. I will bring you into the complete picture of this pending project when I have heard from you.

Yours Faithfully,
DR. KAREEM SALAMI.

[P.S. Dr. Salami, thanks for this great opportunity! You'll have no regrets doing business with Datz Imports/Exports. By the way, don't be scared off by the negative balance in my checking and companion savings account. I will immediately cover the $1,374.65 overdraft balance when my $6.2 million comes in. Thanks again.]

buzz

ODE TO A CODE

A celebration in verse of the Universal Product Code

There are codes of ethics, codes of Morse,
Codes that hackers crack by force.
Codes genetic, codes of blue,
But none can hold a candle to
The code that tells the checkout folk
How much you paid for Diet Coke
Or any item on the shelf
(At Toys "R" Us you swipe yourself).
In Troy, Ohio, was its start
When in a modest supermart
A stick of Wrigley's led the pack
By donning bars of brilliant black.
Then how it spread! So goes the tale,
Soon bar codes graced the U.S. mail,
At airports luggage gets the scan,
Cool kids tattoo them in Japan.
They've saved our nation's grocers much
While making Bush look out of touch.
Five billion swipes worldwide each day!
Enough to take your breath away!
So let's salute this great endeavor,
I give you: Bars and Stripes Forever!

–Leigh Buchanan

SOURCE: INC. MAGAZINE

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UNISYS

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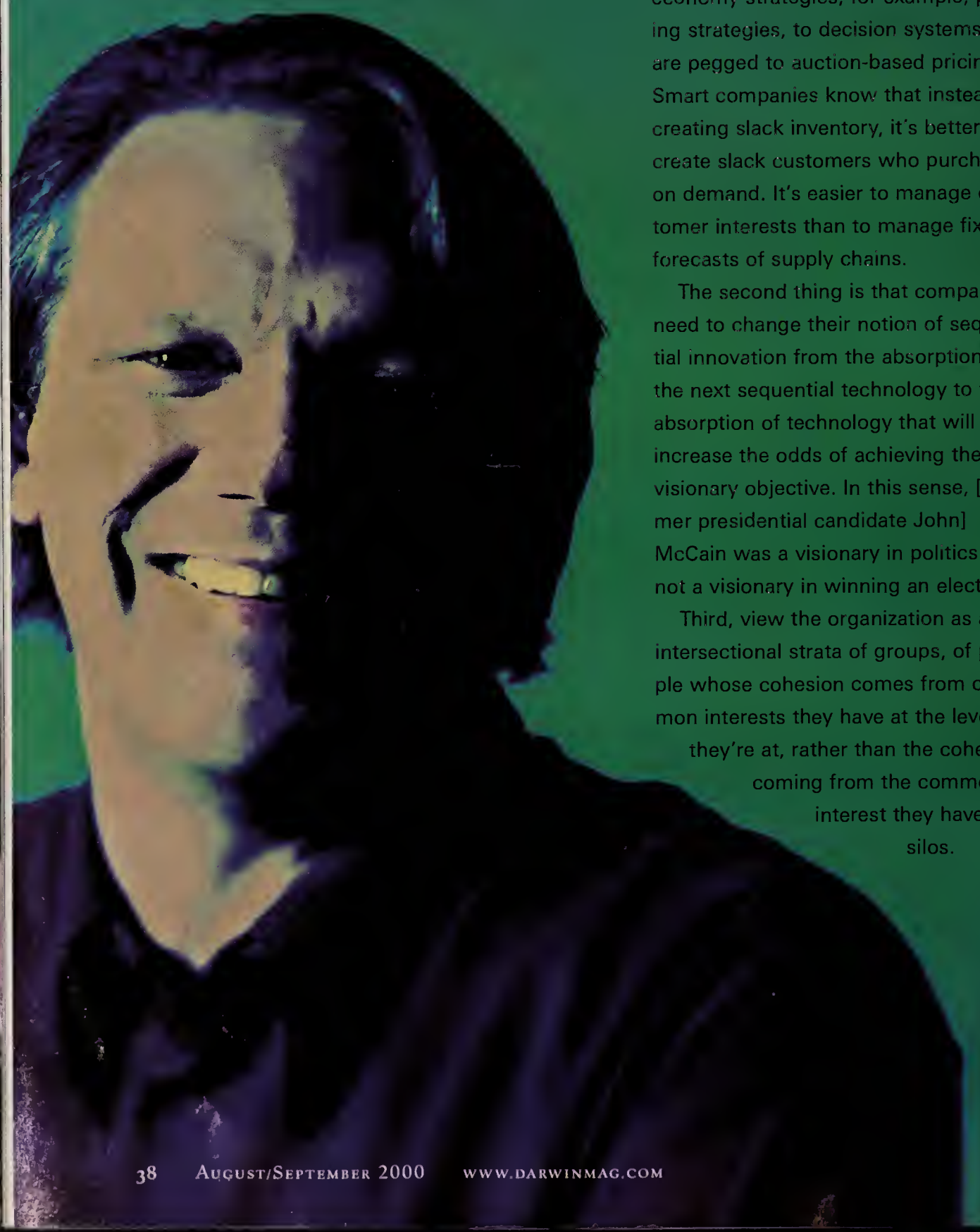
Corporate Prophet

Q&A An interview with **Jim Taylor,** director of the Organic Institute, futurist and coauthor of *The Visionary's Handbook: Nine Paradoxes that Will Shape the Future of Your Business,* (HarperCollins, 2000)

Darwin: What was your most successful marketing campaign?



Jim Taylor: The cow-spot program at Gateway. I've also worked on everything from the members' program at American Express to the launch of GM's Saturn to the launch of the Jeeves character at Ask Jeeves.

How can companies best prepare themselves for the future when the future is moving at Web speed?
The first issue is learning how to integrate the decision logic of the old economy strategies, for example, pricing strategies, to decision systems that are pegged to auction-based pricing. Smart companies know that instead of creating slack inventory, it's better to create slack customers who purchase on demand. It's easier to manage customer interests than to manage fixed forecasts of supply chains.

The second thing is that companies need to change their notion of sequential innovation from the absorption of the next sequential technology to the absorption of technology that will increase the odds of achieving their visionary objective. In this sense, [former presidential candidate John] McCain was a visionary in politics but not a visionary in winning an election.

Third, view the organization as an intersectional strata of groups, of people whose cohesion comes from common interests they have at the level they're at, rather than the cohesion coming from the common interest they have in silos.

Are there critics out there who think trying to predict the future is futile?
Yeah. So. There are lots of critics of the whole idea because the notion of the way things are going to be in the future screws up the entitlements of the present. If I predict that in 2020 we will push past a million people over the age of 100 and that they will control over 50 percent of the world's assets, it is unlikely that they will spend a lot of their assets on construction of new schools, or investments in entrepreneurs. But they will use those assets to influence political behavior that increases funding for expensive biotech ideas about longevity and life maintenance.

How will dotcoms shake out?
The dotcom industry looks like the railroad industry in the 1870s and radio in the 1920s. If you overlay the history of America Online's stock performance with RCA's, they're identical curves. Embedded in this is hope, and hope drives markets. Once hope is tempered with realism, you get what we have now.

Who are today's visionaries?
In the business world, Eddie Hutton [founder of E.F. Hutton], who invented the concept of the vertical monopoly; Neil McElroy, who created the concept of brand management at Procter & Gamble; Bill Gates; Ted Waitt at Gateway, who invented the concept of supply chain management in the PC space, then branded the PC as a friend for life; David Ogilvy, who invented the concept of the advertising campaign; Linus Torvalds, who built Linux, then gave it away—what a magnificent idea and courageous thing to do.

–Todd Datz

PHOTO BY DON MARR

MISSION

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A Historical Perspective

2000	1776
Fighting hackers	Fighting redcoats
Patriot missiles	Misfiring muskets
George Washington's head on quarters	George Washington's headquarters
Online chat rooms	Pubs
Overly air-conditioned offices	Winter in Valley Forge
Thousands still worship the King (Elvis)	Thousands still worship the King (George III)
Outsourcing your network security	Hiring Hessian soldiers
Hair Club for Men	Powdered wigs

Running an e-commerce site is a lot like climbing a first ascent. You have to be bold, assess your environment and make constant changes—ultimately, you're doing things no one has ever done before.

–MATT HYDE, VICE PRESIDENT, ONLINE SALES FOR REI, AND AN ACCOMPLISHED MOUNTAIN CLIMBER WHO HAS SCALED PEAKS ON SIX CONTINENTS

buzz

Tag, You're IT

SMART BOXES International Paper Co. and Motorola have joined forces to create smart packages—shipping boxes that contain embedded tags that communicate with manufacturers and retailers throughout the transit process. This new application for radio-frequency technology is expected to take much of the risk out of shipping high-value items like jewelry, perfume and pharmaceuticals, which are frequent targets of thieves and counterfeiters.

The tags, which are due in packages this year, are made of silicon and ink and emit radio signals that can communicate the item's location and notify distributors if it's been tampered with. The technology is also expected to affect inventory control by automatically signaling suppliers when store shelves run low on their products.

Thieves are reportedly happy because there's no exploding ink involved. *–Daintry Duffy*

PHOTO BY AP, ILLUSTRATION BY FRED RIX

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Chief Impact Officers

LEADERSHIP The 10 most significant CEO hires of the 20th century, based on the impact they had on their companies, industries and the economy as a whole

1. Lee Iacocca—Chrysler
2. Alfred P. Sloan—General Motors
3. Jack Welch—General Electric
4. Lou Gerstner—IBM
5. Jim Barksdale—Netscape
6. Edward V. Rickenbacker—Eastern Airlines

7. Carly Fiorina—Hewlett-Packard Co.
8. Stanley Gault—Goodyear Tire and Rubber/Rubbermaid
9. Pete Rozelle—National Football League
10. Michael Eisner—The Walt Disney Co.

NOTE: FOUNDERS OF COMPANIES WERE NOT CONSIDERED.
SOURCE: CHRISTIAN & TIMBERS

Greener Acres

RURAL MIGRATION For **Karen Harris,** it started as a grand experiment, an adventure, really. In 1998, the consultant and her journalist husband decided to rent out their two-bedroom apartment in San Francisco, pack up the kids and spend a year in Thetford, Vt. If nothing else, they'd make money on the deal.

But within five months, the Harrises concluded they didn't miss the big city—or the outlandish cost of living in Silicon Valley. They put their San Francisco digs on the market and bought a house in Norwich, Vt., a bucolic town of about 3,500 across the Connecticut River from the college town of Hanover, N.H. "We wanted to enjoy nature with the kids, have good schools and a slower way of living," says Harris, who now serves her clients mostly via e-mail, fax and phone, with the occasional travel stint. And because the public schools are good, she can afford to work part-time—in San Francisco, she worked full-time to send her kids to private schools.

Harris and her family are not alone in their quest for the simplicity—and intellectual stimulation—of life in a college town. With low crime rates, good schools, relatively affordable housing and all the benefits of academia to recommend them, university towns like Raleigh, N.C., San Luis Obispo, Calif., and Austin, Texas, are among the nation's fastest-growing areas, according to **Toni Horst,** a senior economist who specializes in regional and demographic issues for Economy.com in West Chester, Pa.

Although some information-intensive industries, such as R&D, still require a skilled labor pool, high-level business services and access to travel, e-mail and the Internet are making it possible—both physically and psychologically—for many ex-city slickers to work where they'd like to live. "People don't want to move to the boonies and feel disconnected," says Horst. "They want their news, they want their MTV, they want a good cable modem connection so that they can work from wherever they are."

"Work pressure is still there," says Harris of her new life in Vermont. "But it just feels like there's more time for kids, more time for friends. The hard part is getting used to the weather." Now that she's equipped to handle winter with six pairs of boots, Harris isn't planning to move anytime soon—except maybe to another house in Norwich.

–Alice Dragoon

COUNTRY BUMPKINS

In the 1990s...

More than 71% of rural counties gained population.

The gain represented 3.6 million people; migration accounted for most of this gain.

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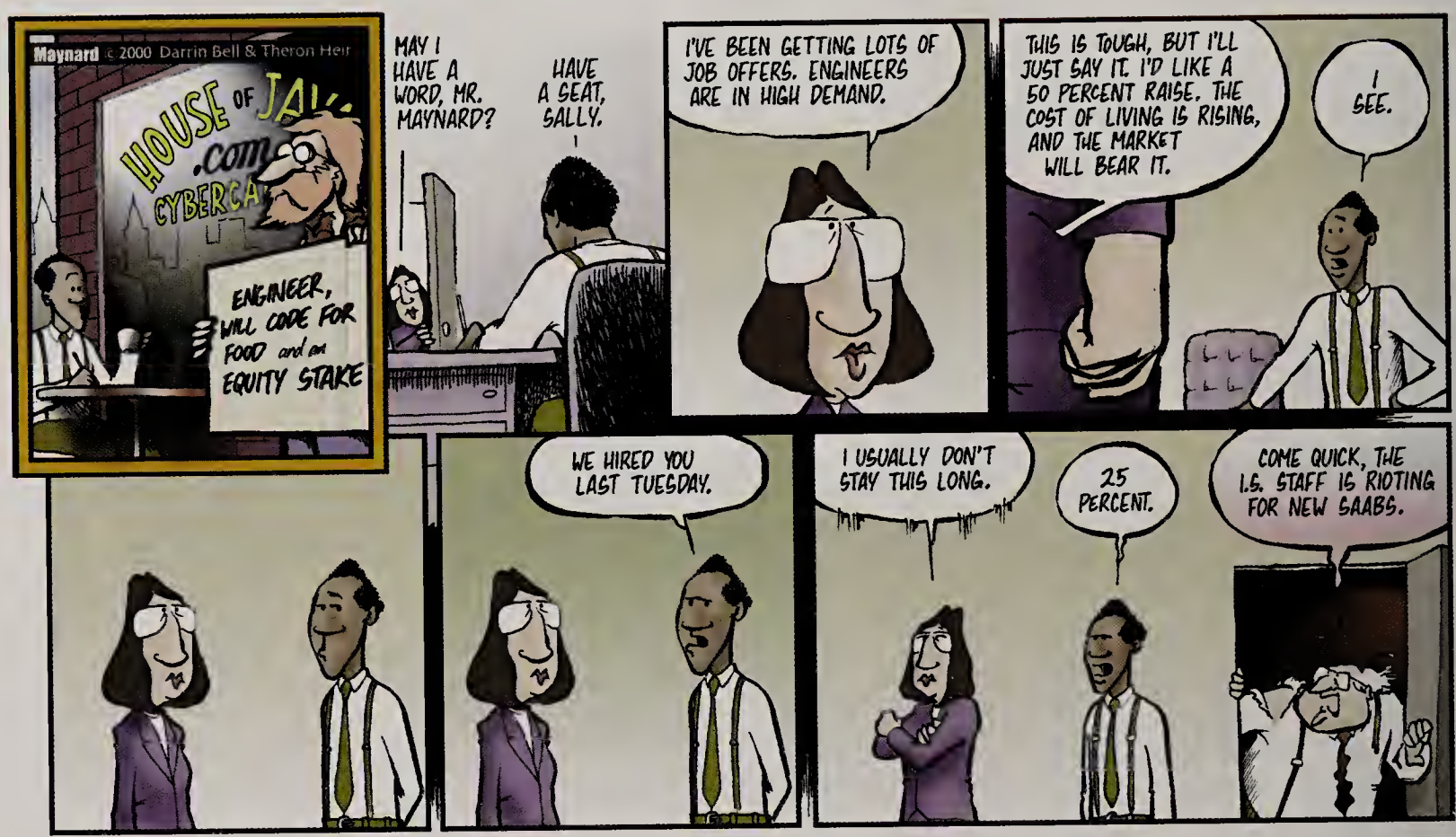


This Little Piggy Became a Marketer

RENT-A-MANAGER Tired of watching your best marketing people jump ship to greenback pastures? Does recruiting replacements take up 120 percent of your time? McKinley Marketing Partners, based in Alexandria, Va., can help fill those gaping holes and give your HR department a break. It provides companies with interim marketing managers for both short-term and long-term projects.

Demand for marketers is currently exceeding the supply, especially with the skyrocketing number of dotcoms, according to **Michelle Boggs,** president and COO of McKinley. "We're barely able to keep up. In some markets, like Silicon Valley, we can't keep up."

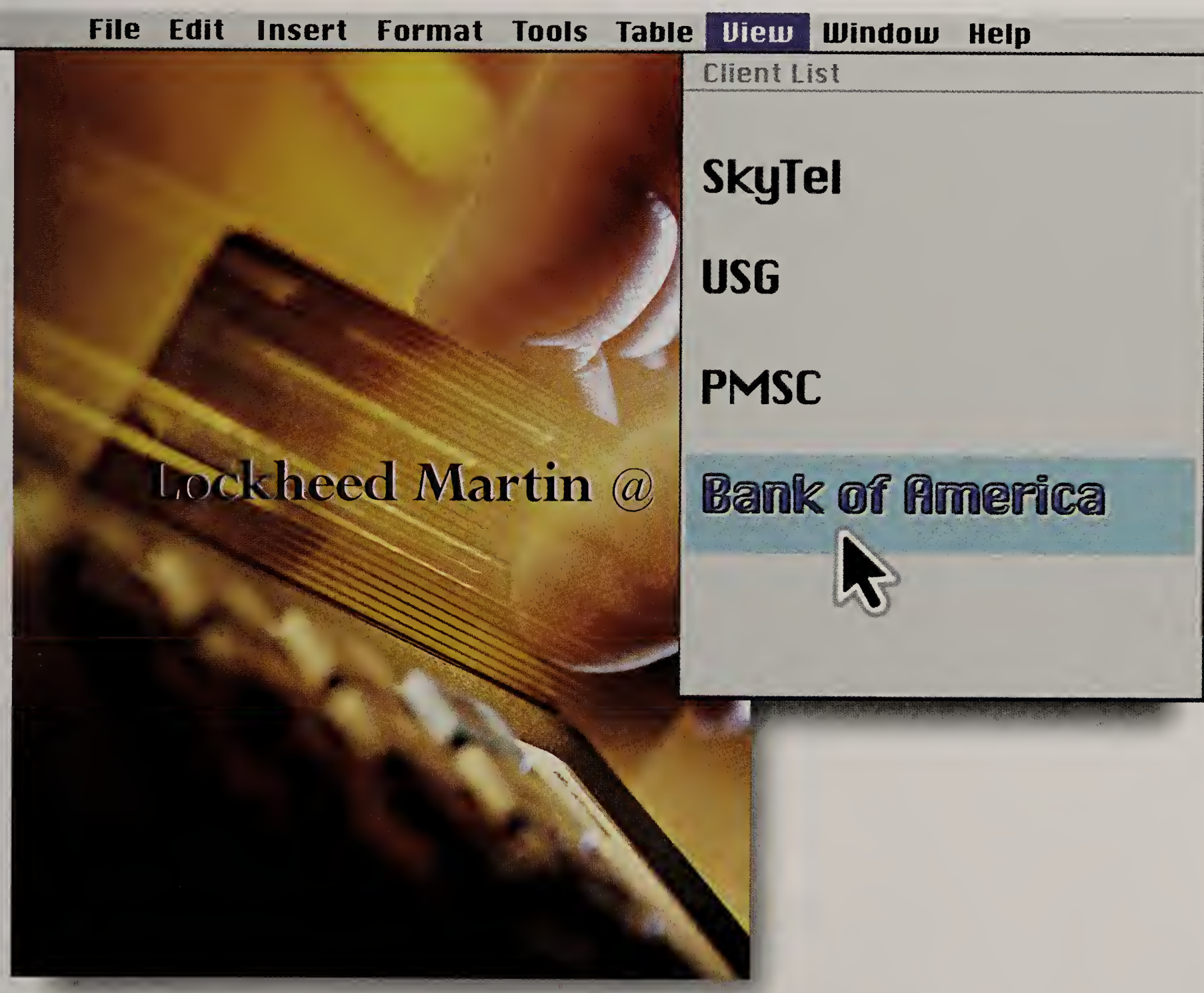
Most of the company's interim managers typically have 10 to 15 years' experience. They go the free-agent route because they want more flexibility in their work life, while maintaining the income of a permanent position. According to Boggs, 99 percent of them get offers to work permanently while on their assignments. "We say to our [company] clients up front, 'You're going to want to hire our folks, but don't get your feelings hurt if they say no, because they've chosen this lifestyle.'" The numbers support her claim—only five have accepted offers in the five years since the company was founded.

Will the demand continue? Boggs seems to think so. "I really do see this as a national trend."

–Todd Datz

ILLUSTRATION BY FRED RIX

MISSION: When Bank of America invested in new technology, they knew success required that people could use it. But how? Traditional training was too slow; hiring new employees too expensive. Lockheed Martin's solution: a business-smart process called reskilling. It uses real projects to teach new skills, guided by experienced coaches.



LOCKHEED MARTIN

SUCCESS: Reskilling did more than train people to run computer systems; it taught people to rethink how they used those systems. The result: competitiveness sharply higher across the company, and a workforce with lower turnover. To see what Lockheed Martin IT expertise can do for you, visit www.ibs-lmco.com.

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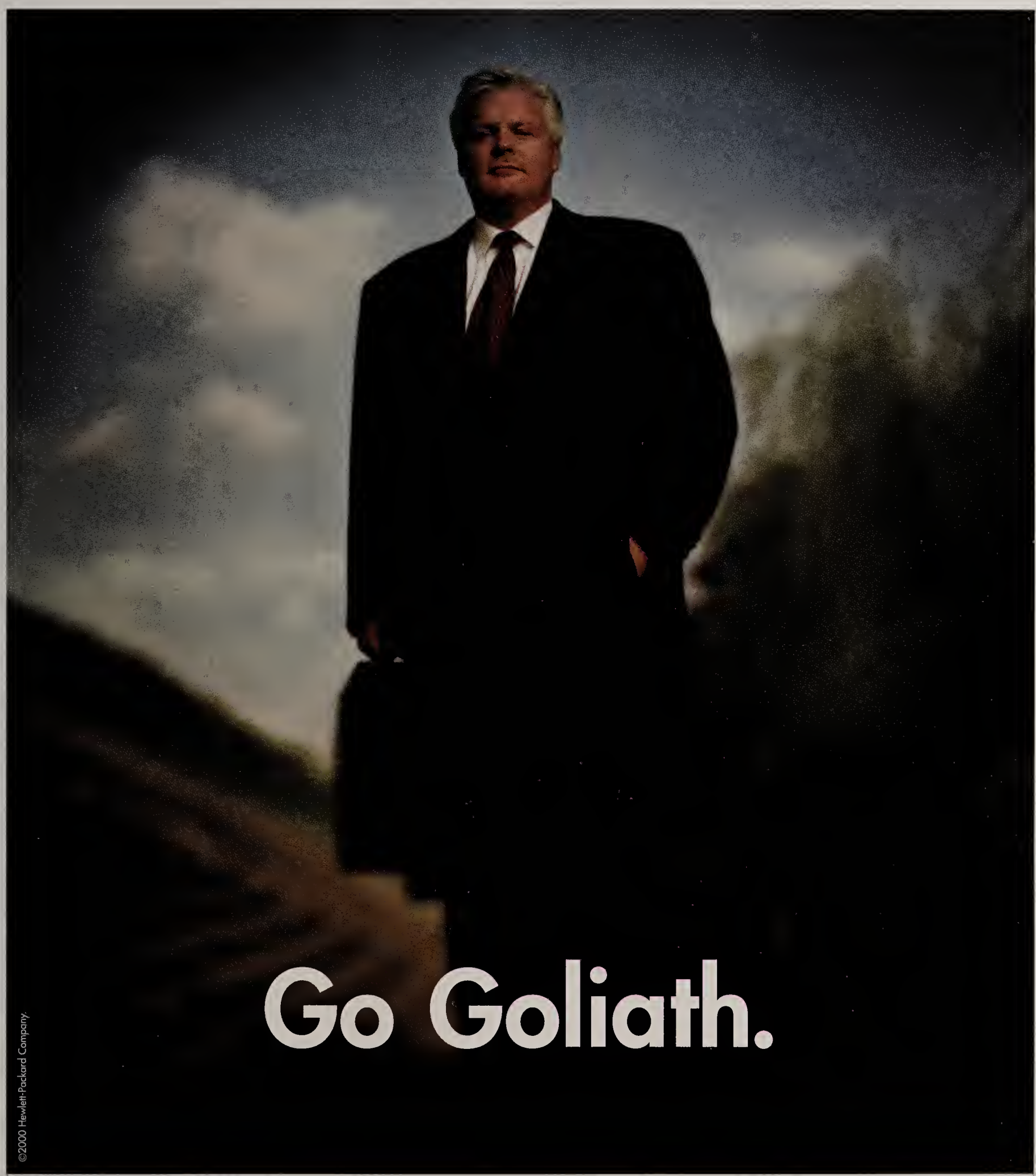

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Scaredy Pants

Levi Strauss, backing away from its earlier Net derring-do, is still shopping around for the right online strategy

How much time do you have to figure out your Web strategy before the world stops caring? At what point does careful consideration verge on utter paralysis? How many times can someone steal your lunch money before you starve to death?

I'm thinking about those questions because I've been researching the Internet initiatives of Levi Strauss. You remember them: They're the San Francisco company that makes those great, durable blue jeans that young people don't wear anymore. They also make Dockers, the default pants for clueless middle-age males trying desperately to fit in on casual Friday. So Levi's faces big branding and marketing challenges; somehow, The Gap, also based in San Francisco, commandeered the microphone, and they now speak to teens and young adults in a voice that's more relevant.

For Levi's, solving the Internet problem is going to be an important part of reestablishing a relationship with young buyers. Unfortunately, in the process, Levi's—and many other big companies—are going to discover that the answer to my first question isn't quite as forgiving as they'd hoped.

Here's a brief history of Levi's on the Web. The company launched a dazzling site in 1995, decked out with some of the first animated graphics the Web had seen. In November 1998, it began selling a selection of about 3,000 products directly to consumers. One nifty feature made recommendations of Levi's products to site visitors based on their taste in music and clothing. At the time, Levi's prohibited any of its real-world channel partners from selling Levi's products online.

In October 1999, the company swung around 180 degrees. It decided to stop its own direct-to-consumer sales on the Web after the holiday season and sell only through the sites of two major channel partners: Macy's and J.C. Penney. The company was cutting costs, and direct-to-consumer e-commerce had proven more complex and expensive than it had anticipated.

The strategic switch created two big problems. First, it meant that all of Levi's other retailers that operate websites were ticked off by the company's favoritism toward Macy's and J.C. Penney. And second, it meant that Levi's had abdicated control over the customer experience. It would be more difficult for the company to ensure a compelling online buying experience and also to gather data about purchase histories and habits. To top it off, the closure of its online store smelled like surrender.

"They panicked and ran into the wrong arms," says a friend who is a high-level e-commerce executive. "You couldn't pick weaker retailers in the clothing segment than Macy's and J.C. Penney. And they abandoned the Web but kept their brick-and-mortar [Original Levi's stores], which are more offensive [to their retailers]."

I decided to test-drive Levi Strauss's new Net strategy by buying one product from Macy's and one from J.C. Penney. I started at Levi.com, which pointed me to both retailers' sites. That took me to the front page of the Macy's site, which happened to have a link to its Levi's "specialty shop." (When I checked again recently there

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was no link from the homepage.) The selection in the Levi's men's department was limited: one jacket, six pairs of pants and one shirt in one color. (When I checked a second time, they had expanded to all of 12 products.) I bought the shirt, a green, short-sleeve button-down. It arrived 10 days later in a small, brown, cardboard box, nicely folded, with tissue paper lining. And it fit.

So did the red polo-style shirt I ordered from J.C. Penney. That site offered a slightly better selection but put me through a circuitous ordering process. The order arrived just four days after I placed it—remarkable speed for the Web. But the shirt had been shipped in a gray, unstructured plastic sack more appropriate for mailing live bait than casual apparel.

Levi's seems to have gotten caught in an endless loop of analysis.

I would give both retailers a B- on their customer experiences, neither wowed me. If I wanted access to a wide range of Levi's products, there was no way to buy them online. And if I wanted to purchase one of the coolest Levi's offerings—the Original Spin customized jeans—I had to visit an Original Levi's store.

When I contacted Levi's in June to get an update on its Internet strategy, a series of strategic planning meetings were taking place. The task force debating the future of Levi Strauss's e-commerce activities included people from several departments, but there wasn't a single "e-commerce czar." A Levi's spokesman describes it as "a partnership between the IT people and the branding people." But my friend the e-commerce executive says, "this is the worst kind of thing to do by committee." He had spent a year as an e-commerce czar trying to get another consumer-products manufacturer to embrace the Net, and even that effort got bogged down in bureaucracy.

It sounds like change will be coming—at tectonic speed—to Levi's Net strategy. "During the next year, we will likely be working with a very select group of additional retail partners," says Kathryn Henry, vice president of business technology at Levi's. "We'll look to extend our assortment available online. Longer term, [we're thinking about] how we build a foundation to better collaborate with our channel partners—sharing product images and data and marketing campaigns with them, tying their websites to what people see in the store and on television."

I applaud Henry's efforts to increase the number of products available online and to explore new ways to support channel partners on the Web. If Henry can work with Levi Strauss's partners to gather data about how and what people buy on the Web—which will likely be a contentious and technically challenging project—she'll have created a kind of symbiosis that would be a model for other manufacturers.

But the danger is that by the time Henry does that, the Levi's brand will be shrunken and shriveled in the minds of most Web shoppers. Right now, with Levi's products sold through just two sites, the odds of clothing shoppers encountering Levi Strauss in their Web travels are incredibly low. I think Levi's should make it a goal to have its product sold by the top 10 online clothing retailers—whether or not the company already has an offline relationship with them.

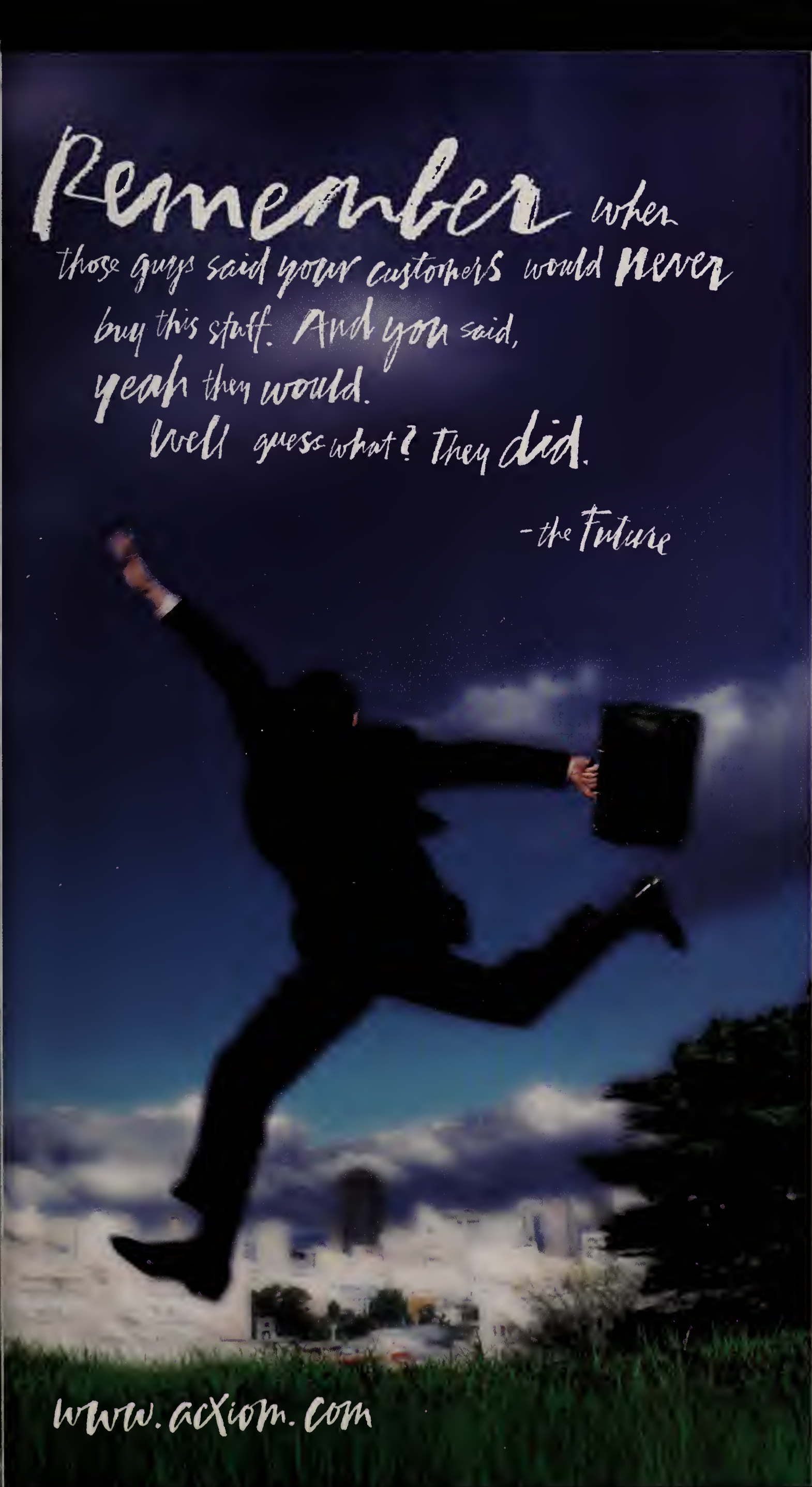
The company also ought to spotlight its customization capabilities on its website—it was the first major consumer company to begin building a mass customization capability, in 1995, and in its San Francisco flagship store, it even has a futuristic body scanner. Though Levi's has abandoned Web customization initiatives in the past (again, too expensive and complex), it should revive them, at least offering the ability to reorder customized jeans that you've designed in its stores. Offering customizable products online is one of the best ways to develop a strong relationship with customers, and to hear what they do and don't like. Unfortunately, Henry at Levi's says customization on the Web is longterm.

Levi's should also sell limited-edition products or small quantities of vintage jeans on its site. Why? So that Levi.com is perceived as the online repository of the brand essence—and also so that Levi's can set an example for its channel partners by delivering a killer customer experience, even if only on a small scale.

Up until last fall, Levi's exhibited what I think of as a fashion-forward approach to the Net—let's try new things before anyone else and see what works. Selling direct to consumers on the Web while prohibiting channel partners from doing the same clearly didn't work. But in formulating a different strategy, the company seems to have gotten caught in an endless loop of analysis. On the Net—which is about trying, doing and generating buzz—that's tantamount to death.

As we used to say in grade school: Hey, Levi's! Your barn door is open.

Have your Web plans been chilled by analysis paralysis? Tell us at *ecosystem@darwinmag.com.*



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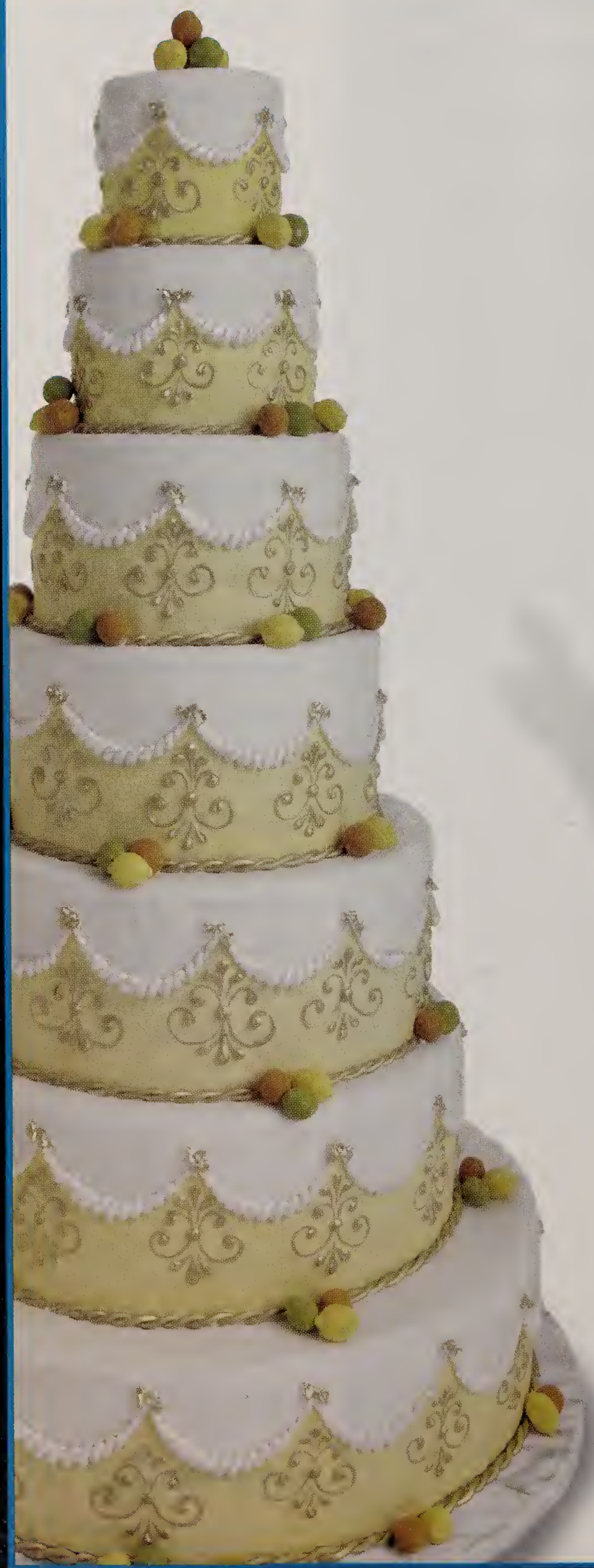

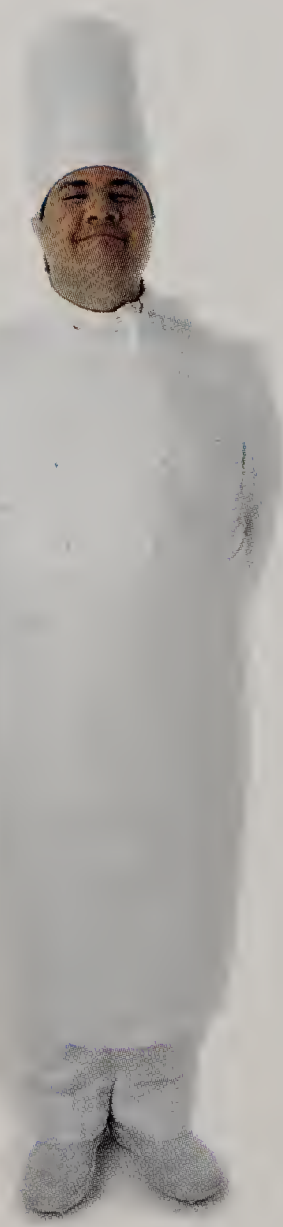

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Get Real

Your customers are human beings. So why are you afraid to just *talk* to them?

Marketing is a hostile act. After all, marketing exists only because the markets aren't doing what the company wants. And as marketing tries to bend an unwilling public to the corporate will, we customers cringe. We hate ads. We resent billboards. We're appalled by junk mail. We're indignant about spam. In fact, we invented the TV remote control not because we want to watch five programs simultaneously but because we don't want to watch a single commercial. It's Us against Them, and They just won't leave Us alone.

It's no accident that we feel bombarded. The very language of marketing is that of war: Marketers identify targets, develop strategies and launch campaigns with the goal of capturing market share. What's more, customer service departments view us—the paying customers—as nuisances. From their perspective, we're trying to bleed them dry with our incessant questions, complaints and overall whining. Every customer interaction costs the company $15, $50, $100—money that otherwise could have been invested in the business or, better yet, kept. So companies dig their defensive structures, staff them with people they refer to as being "in the trenches," and strive to minimize the cost of engaging with us.

The military mentality that pervades marketing and customer service is a result of business's ubiquitous fear. Just as studies show that people are more afraid of public speaking than of dying, organizations are more afraid of being exposed than of failing. They fear that the market will see that their business doesn't run like a clock designed by God; they're composed of fallible human beings. What a shock!

Combine fear and aggression and you end up with companies literally afraid to speak like human beings. It's easier, after all, to plan an attack than to communicate on the fly and—gasp!—listen. So companies talk to customers in language designed to squelch true conversation. And they write statements of purpose that set vainglorious goals to make themselves feel better, such as this from Quaker Oats:

"Our Goal: To be the undisputed leader in the food and beverage industry. We intend to do this by making Quaker a winning company—a place where talented people have opportunities and are rewarded for contributing to an exciting, profitable growth story. Winning means that our products will be those for which consumers hunger and thirst. Winning also means that we outpace our competitive set with consistently strong financial results."

The undisputed leader in the food and beverage industry? Through Cap'n Crunch and Rice-A-Roni?

Or they write empty statements such as:

"We will provide products of superior quality and value that improve the lives of the world's consumers. As a result, consumers will reward us with leadership sales and profit growth, allowing our people, our shareholders and the communities in which we live and work to prosper."

Can you tell whose goal this is? In fact, whose isn't it? (Final answer: Procter & Gamble.)

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Or they write statements of "vision" that aren't just empty, they're self-reflectively, tautologically empty, such as this one from Dell:

"It's the way we do business. It's the way we interact with the community. It's the way we interpret the world around us—our customers' needs, the future of technology and the global business climate. Whatever changes the future may bring, our vision—Dell Vision—will be our guiding force."

Our vision is to have vision? We've gone past vision all the way to metavision? Oh, please! Does any human being ever talk this way?

Now consider this mission statement:

"People for the Ethical Treatment of Animals (PETA)...is dedicated to establishing and protecting the rights of all animals. PETA operates under the simple principle that animals are not ours to eat, wear, experiment on, or use for entertainment."

Clear, straightforward. Why, you could practically imagine a human being saying these words! PETA's passion is visible in the directness of its language. Or this from Ben and Jerry's mission statement:

"To make, distribute and sell the finest-quality all-natural ice cream and related products in a wide variety of innovative flavors made from Vermont dairy products."

Jeez, they flat out say they make ice cream...not "frozen confectionery consumables to enhance the global dessert and entertainment food lifestyle" or some other self-inflating codswallop.

The problem goes way beyond mission statements. Virtually every form of corporate communication—from customer support scripts and press releases to marketing brochures—is written in a stilted language intended to deliver the company message and to avoid risk. For example, I heard from a customer support person at Amtrak who had been chastised for saying, "Bye, and you have a nice day" rather than the officially sanctioned farewell along the lines of "Thank you for thinking of Amtrak for your travel needs." Gosh, for a moment she actually sounded like a human being! Compare that support person's friendly way of speaking with this official quote from a CEO:

"Once again our strong and profitable first quarter results set the stage for BroadVision to move forward aggressively in the coming year," said Pehong Chen, president and CEO of BroadVision. "Our goal is to help enterprises create profitable e-relationships with their customers, suppliers and employees using our complete suite of personalized e-business applications. In essence, these enterprises rely on BroadVision to solidify the company's entire value chain, known as 'B2B2C', so that they can become serious players in the New Economy...."

Virtually every form of corporate communication is written in a stilted language intended to deliver the company message and to avoid risk.

Here's a quotation we can be assured no one ever uttered. And no one will read, except to scan for cryptic keywords that hint at what's going on in the company. Ironically, BroadVision claims that its software enables "personalized interactions" with customers and suppliers.

You fix this type of dehumanizing language not by hiring snappy writers who can imitate the way humans talk but by letting actual human beings talk without scripts. Your customers are already on the Web talking about you and your products. They're doing so in natural language. They sound like themselves. And they're making lots of jokes. Every time your company tries to enter that conversation with some Corporate Speak blather, your customers get a good laugh. And get more and more resentful. They desperately want to talk with the people inside your organization who care about the products you're building. You do have some of them, don't you? Let 'em out! Let them find the places where the conversations are happening, and let them jump in. Let them sign their names and talk like themselves. Let them tell the truth.

Sure there's a risk. But there's a risk to being the butt of everyone's joke, a risk to being perceived as a robotic, soulless company that doesn't care a fig about what it's building or about the customers it's selling to. There's a risk to being totally ignored.

As Deming said, drive out fear. Stop hiding behind your professionalism. It's OK to be enthusiastic. It's OK to make mistakes. It's OK to be human. Really.

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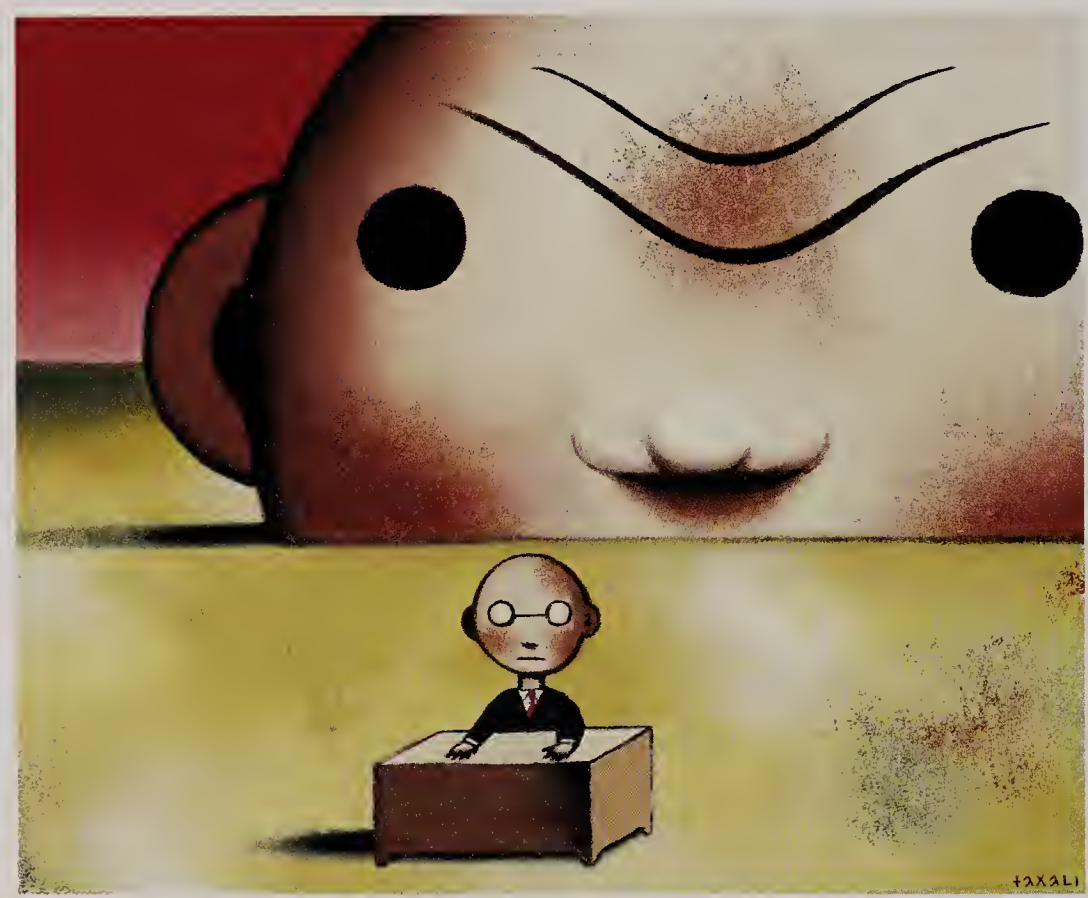

A friend of mine refuses to answer her e-mail at work. She's read about employees getting fired for inappropriate e-mail use at companies including, but not limited to, the St. Louis-based stock brokerage of Edward Jones and America's newspaper of record, *The New York Times*. It's not that she has any plans to send off inappropriate e-mail or get caught in a web of company secrets being routed to competitors. No, for her the horror stories are daunting enough. She's not willing to risk being innocently drawn into something that could cost her her job. So e-mails to her go unanswered, compromising her workplace productivity. If she needs to follow up, she'll make a phone call or walk to the sender's office.

The ability to monitor employees' Internet and e-mail use places businesses at an interesting crossroad. Major technological advances over the past five or six years have resulted in most workplaces being wired for e-mail and Internet access. The explosive growth in the number of employees connected to the Internet is staggering. By 2002, it's estimated, more than 88 million users in the United States alone will be connected to the Internet at work. Because work connections are typically faster than those in the home, it's no surprise that workers admit to doing personal tasks on company time using company computers. In a survey of corporate Internet usage, Elron Software, a maker of monitoring software, found that one in three respondents admitted to spending more than two-and-a-half hours a week online for personal reasons.

The question employers now face is what, if anything, to do about employee waywardness. If the accelerating sales of corporate Internet access monitoring and control products are any indication, the answer increasingly seems to be to keep tabs on every move an employee makes online. In 1998, sales of such products stood around $31 million. By 2003, according to IDC (a sister company of *Darwin*'s publisher, CXO Media), those sales will hit $260 million, representing a growth rate of more than 50 percent a year.

Certainly, companies have every right to make sure that their employees are productive and not engaging in any illegal activity on the Internet while at work. And indeed, many seem to be taking such precautions: 54 percent of employers surveyed by the American Management Association earlier this year are currently monitoring their employees' Internet connections; 38 percent review e-mail messages, up from 15 percent in 1997.

But spending resources on such surveillance is not without risk. For one thing, an unintended consequence of spying on employees as they work is that the vast majority of productive workers could become demoralized and—like my friend who refuses to respond to e-mail—ultimately be less productive and less trusting of their employers. Companies "that monitor e-mail traffic or use the power of modern technology to act as Big Brother to the employees are dehumanizing the work environment," said Allan A. Kennedy, a management consultant and coauthor of

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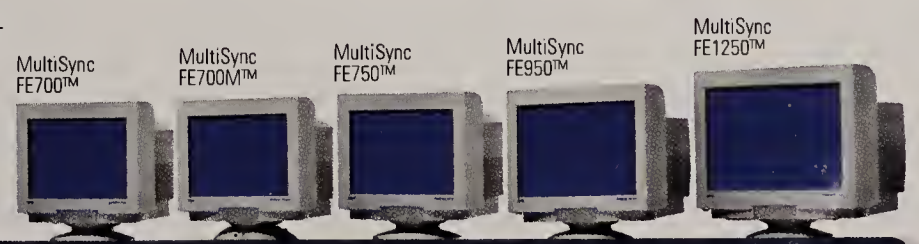

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The New Corporate Cultures (Perseus, 1999), in a column I wrote about the Edward Jones case last year. [That case involved instances of "inappropriate" e-mail being sent within the company. An investigation by human resources led to numerous firings and reprimands.]

The question of whether it makes sense to embrace any new technology simply because we can "touches on the issue of technological determinism—the notion that we are somehow in the thrall of technology, unable to use it thoughtfully and responsibly," says Richard Spinello, an associate research professor at the Carroll School of Management at Boston College and the author of *Cyberethics: Morality and Law in Cyberspace* (Jones and Bartlett, 2000). Spinello cites Max Weber, the early 20th century sociologist and author, who regarded technology as "an iron cage" in which workers become ensnared. "In my view," says Spinello, "this evocative term comes close to describing the current workplace."

So which is technology to be: a bearer of freedom or of unseen shackles? The advent of new technologies raises an important ethical issue for employers. Since these new tools represent unprecedented opportunities for workplace monitoring and control, do we rationalize corporate policy to fit the opportunity? In other words, do technological developments become the foundation for ethics in the workplace?

"Technology is most controlling when we lose sight of how pervasive and insidious it is and can be," observes Daryl Koehn, director of the Center for Business Ethics at the University of St. Thomas in Houston. "Businesses have spent way too much time and money in monitoring people. A business has a choice: It can either spend lots of money blocking websites, recording keystrokes, running algorithms to detect inappropriate use of corporate assets, or it can assume that most people want to do the right thing most of the time."

Because technology happens to us so quickly, it often blinds us to some of the pitfalls that will follow in its wake.

Koehn believes that businesses "must decide whether they are going to manage to the 98.5 percent of employees, vendors and customers who are decent, or to the very small percentage who are running scams of one sort or another." Companies that assume the worst of people and monitor their every move "will never have a culture characterized by integrity, empowerment, quality and spontaneous fun. At best, it will have a culture of compliance."

But better still than fretting over monitoring of any type—and investing the valuable time and resources that monitoring can take—is to use new technology in a way that's relevant to your core business.

"I'm sure that there's a certain amount of personal use going on," says Martin Babinec, CEO of TriNet, a San Leandro, Calif.-based company that supplies businesses with payroll, benefits and human-resource support. "But we concentrate on things that are more production-oriented and specific to the task." Babinec and his 319 employees have used new technology to build an intranet that allows the entire staff to share financial information about the company with one another. As practitioners of what's been called open-book management, TriNet embraces technology not as a tool for catching willful employees but as a way to share information and build trust by focusing everyone in the business on the company's core purposes.

Ultimately, the true choice for any company is whether to allow new technology to define the business. It seems the better model would be to let people decide what kind of culture and work environment is needed, and then let those decisions dictate which technologies are best suited to reach those ends. It's a simple enough choice; but because technology happens to us so quickly, it often blinds us to some of the pitfalls that will follow in its wake.

Of course, if you've attracted the right people to your business in the first place, such questions become irrelevant. "We have a very structured hiring process," says Babinec. "We look for qualities that are important for what we believe will predict the person's success in this environment. If we hire the right person to begin with, then we really don't have to spend a lot of time monitoring his activity and behavior or things that other companies do have to worry about."

At a time when distractions can cost any company competitive advantage, the real goal should be to find the right people, uncage them and embrace the technology that helps them do their jobs.

Jeffrey L. Seglin (*jseglin@post.harvard.edu*) is the author of *The Good, the Bad, and Your Business: Choosing Right When Ethical Dilemmas Pull You Apart* (John Wiley & Sons, 2000). He teaches in the writing, literature and publishing department at Emerson College in Boston.

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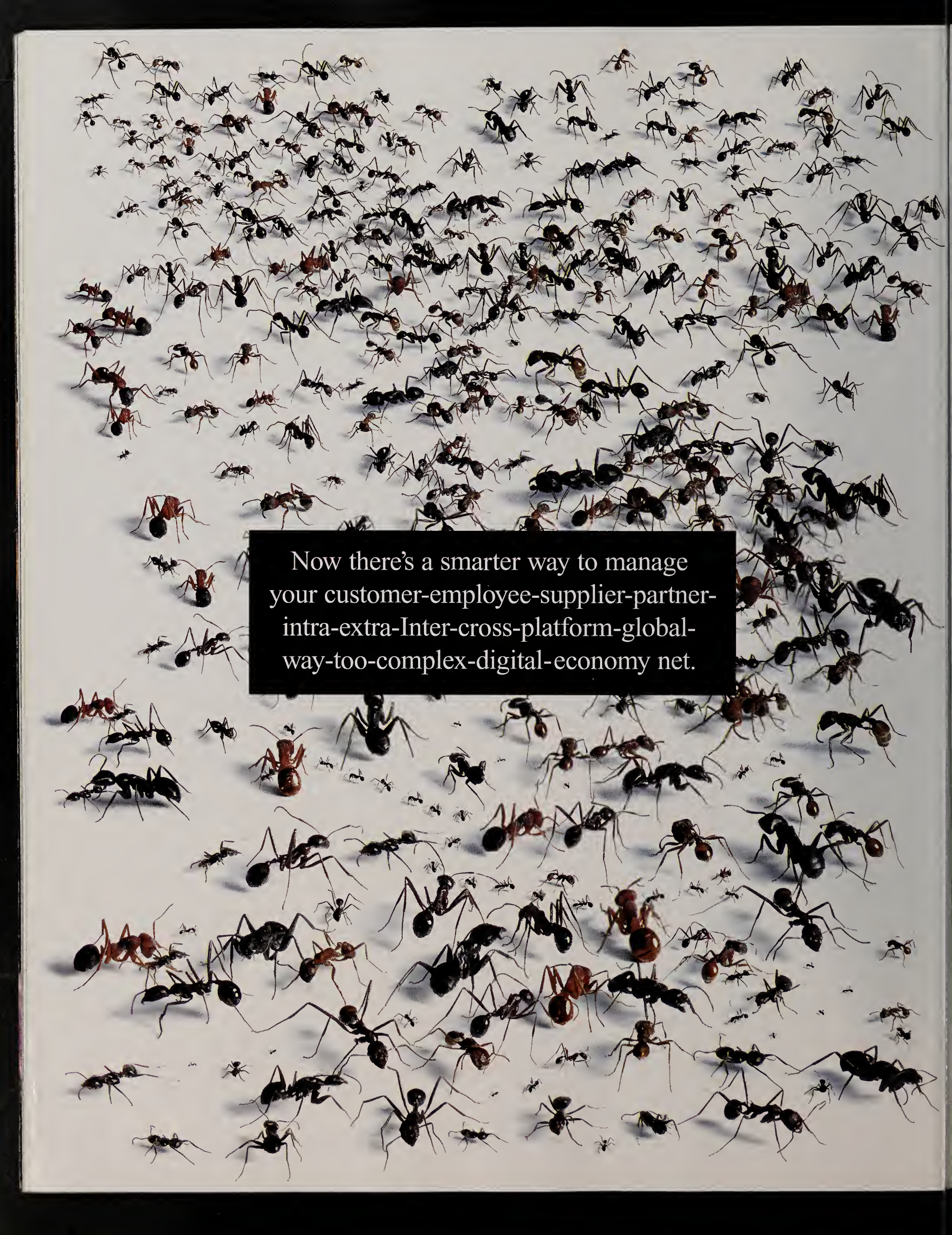
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Moby Click

Nervous netrepreneurs rush to harpoon the Great White mezzanine round

One cool day in early May, the ferry to Nantucket, Mass., burped up a gathering of the dotcom clans, causing a preseason spike in cell phone traffic. The New England region's Internet economy movers and shakers convened there to hash out some of the business issues and new market realities circa the period of post-Nasdaq jitters. (Full disclosure: *Darwin* Editor at Large Scott Kirsner was one of the conference organizers).

The island of Nantucket is historically well suited to host a conference of Internet entrepreneurs. Nantucket's economy is no stranger to cataclysmic flux. When oil was discovered in Pennsylvania in 1859, it snuffed out Nantucket's world-beating whale-based business model virtually overnight. At its height, the whaling industry made Nantucket one of the busiest, most prosperous ports in America. Whale ships typically sailed out on round-the-Horn voyages that lasted two or three years—sometimes longer. No doubt many of these intrepid vessels went forth from Nantucket Harbor shortly before the discovery of crude oil and returned, fully laden with now-worthless spermaceti, to the looming prospects of economic disaster.

One imagines the Quaker ship captains' laments: "Lamps are lighted with what now? It comes out of the ground, you say? Preposterous!"

When the whaling economy cratered, nothing leaped up to take its place until nearly a century later, when tourism blossomed. Tourism is invariably a non-indigenous economy—thriving in good times by siphoning off some of the surplus bounty of other economies' robustness. If everyone else's economy sucks, Nantucket's will too.

This has been a source of consternation on the island for generations. Even at its palmy best, the tourist trade triggers ambivalent feelings in a community whose history is steeped in rugged individualism and self-sufficiency. But the successor business model imposes harsh terms on the quality of island life. In season, the population swells roughly sixfold. The narrow streets are clogged with SUVs the size of beach cottages; the tempo of life goes manically Manhattan; a plague of cell phones and incivility descends; islanders move out of their own homes (if they're lucky enough to own) or their winter rentals to make way for people who can afford vacation rents that are the stuff of Gordon Gekko's dreams. It used to be easier to find good help; now the help can't afford to live here.

But it's better than nothing, right? As a bitter joke about the tourists puts it: "Why can't they stay on the mainland and just send their money over on the boat?"

It is jolting to see uncertainty creeping into the affect of new economites; after all, they are widely—and unfairly—stereotyped as smug, multiply pierced Sandinistas laying waste to the old economy. In truth, most of them are zealous builders who are simply using the very latest in construction techniques and materials. But the tone of this meeting (officially off the record to the few

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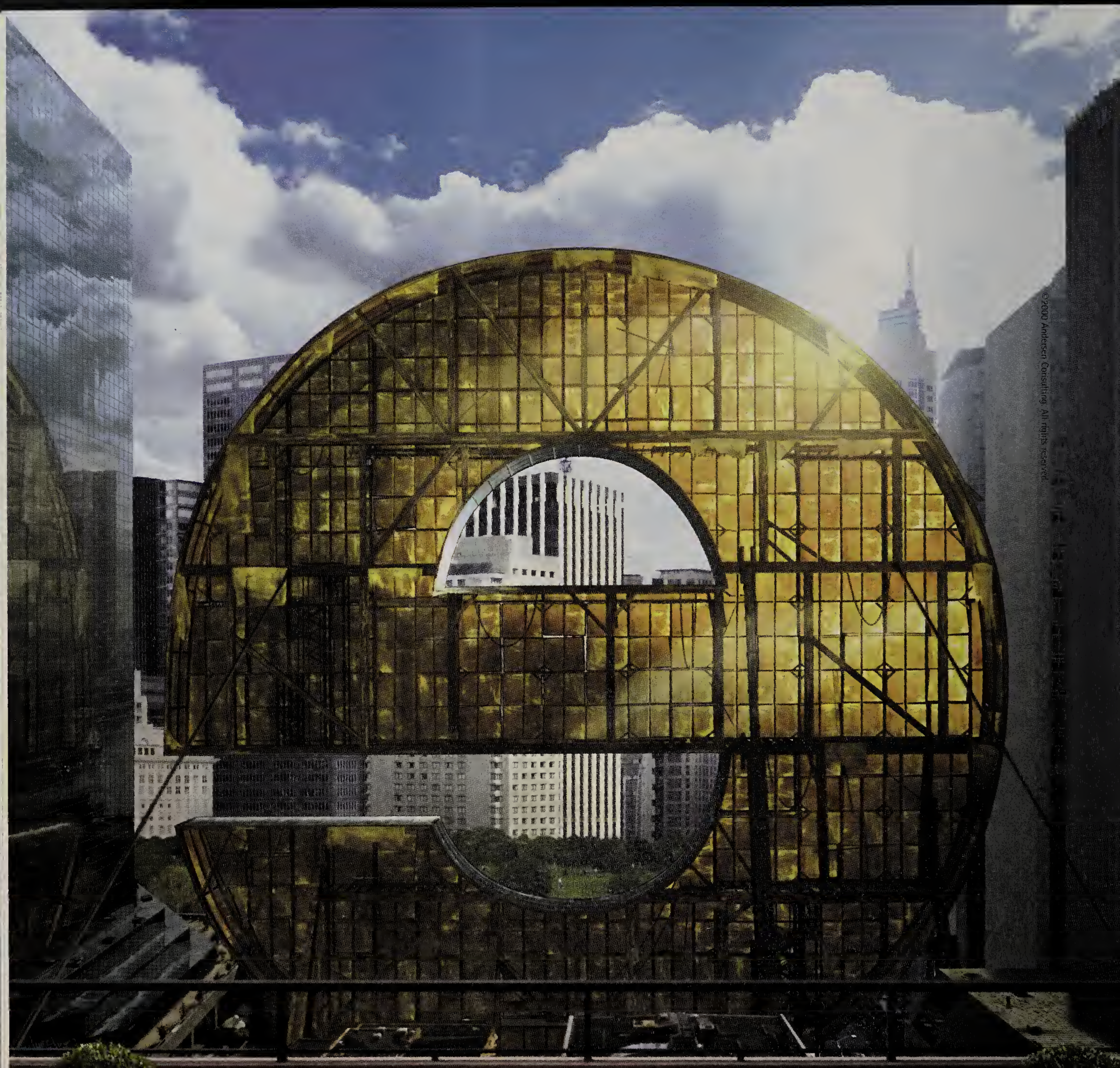
The Web site is awesome.



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media types in attendance) was decidedly anxious. This April really was the cruelest month for pre- and post-IPO ventures alike. Suddenly, with stock options turning to dust, new ventures' ability to attract top talent (and needed rounds of investment) was in serious jeopardy. When living to fight another day is the main objective of every fledgling business, a sudden reemergence of the boring old laws of gravity is a stone bummer. Hemorrhaging both people and money is a lose-lose proposition.

But anxiety, like misery, loves company; and finding others who are just as freaked out as you are can be oddly soothing. To begin with, East Coast Internet types have suffered from West Coast envy for years. Part of this has to do with a dearth of regional community-building and bonding activities. Indeed, many attendees and speakers declared the Nantucket event a momentous occasion of solidarity—something everyone freely admitted is done much better out West. In fact, people kept referencing a range of activities that are done much better out West (with the possible exceptions of commitment and loyalty, which are apparently perceived as mostly Eastern virtues).

Speaker Bob Metcalfe (see "Information Wants to Be Free," *Darwin*, June/July 2000) gently satirized this Atlantic-versus-Pacific inferiority complex: "Up in Camden, [Maine], where I live, we Internet types get together and say we wish we could be as cool as the crowd in Portland. And when I go down to Portland, we sit around and talk about how great it would be if we were as cool as the people in Boston. And the people in Boston all sit around and envy Silicon Valley. And I don't know who the people in Silicon Valley envy. Probably, they don't even think about it."

And clearly there's much more to think about these days than bicoastal rivalries. Besides the dominant keywords, "I need funding," cried out loudly at every opportunity—from the cocktail reception to the clambake to the general sessions—the conference's agenda tackled such competitive practicalities as hiring and inspiring (including the need at some point to deliver that all-important "we happy few, we band of brothers" speech to the restless troops); brand building (attendee consensus: dotcom TV advertising bites, except for the sock puppet); content creation; partnering at Internet speed (one panelist candidly acknowledged that last year's alliance partners, signed on after arduous negotiations, were unceremoniously dumped after a recent strategy rethink); team building; and, of course, the need to hone a really pithy elevator pitch to use when you've bearded the elusive venture capitalist—say, on the foggy streets of Nantucket. (Yes, there were investors in attendance.)

Despite the Nasdaq jitters, it was the sense of the meeting that a purging of weaker players from the dotcom gene pool would be healthy. In fact, when anyone uttered anything sounding remotely like rational economic theory, there ensued much vigorous head nodding, as though it was just such a relief to have finally driven a stake through all of that promiscuous doling out of cash to a bunch of obvious losers. On a deeper level, it was a bit like the greasy dawned ending to a long, guilty debauch at the house of the kid whose parents are off on a two-week ski holiday in Gstaad. As Mom and Dad return a day early, it's written on the teenagers' hungover faces: We know we've been bad. But it sure was fun.

What's semiclear for right now—as the dazed pundit class tries to figure out just what's going on—is that at least some of the principles that made the old economy get so, well, so old, still have a little bit of tread left. The days are probably over when a business model that looks suspiciously like a Ponzi scheme will get much traction with investors. And it's likewise salubrious that the merely greedy are now being separated from the herd of more-dedicated workers. Not that there's anything wrong with greed. But it's no secret that some companies simply emptied out when the vesting schedule rolled around. If the new economy means building up enterprises around people whose work-life expectations vibrate to the frequency of lottery scratch tickets, how will it ever grow up to be an old economy?

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Coming

BY ART JAHNKI

Actor and Oscar-winning screenwriter

Ben Affleck has been a lifelong computer geek. Now he's got a front-row seat as technology does a big-budget remake of old-time Hollywood.

When *Darwin* Web Editorial Director Art Jahnke was much younger—long before there was a World Wide Web on which to editorially direct—his son Soren was growing up in Cambridge, Mass., with a playmate named Ben Affleck. The two boys were avid computer users and would spend their after-school hours goofing around on what were then state-of-the-art boxes for home computer hobbyists.

Years passed. Affleck became renowned for something other than his Donkey Kong skills. But his enthusiasm for computers and related technologies lives on. In an interview with Jahnke, Affleck reminisces about his youthful pursuits, muses on the possible fates of intellectual property and speculates on how the film industry could mutate in the coming years.

Attractions

DARWIN **Let's talk about how computer technology and the Internet have influenced you. I remember, years ago, when you and Soren would download hundreds of games with what, a Commodore 64?**

AFFLECK Yeah. We had Commodore 64s, and I think we had an [early] PC at one point.... We were using what sort of became the Internet—dialing up on bulletin boards. I think I had a 300-baud modem. It's sort of the equivalent of saying, "When I was a boy we had cars with stone tires." You know? "And we liked it."

And you did like it.

We would download these really simple, rudimentary games. Incidentally, it was all illegal. [But] it was mostly about trading the games. You couldn't get something without offering something else in exchange. Interestingly—and I think this is part of the psychology of the Internet—it was more about accumulation than about actually playing them.

You guys never played the games. I remember Soren would come home and say, "We got 942 games."

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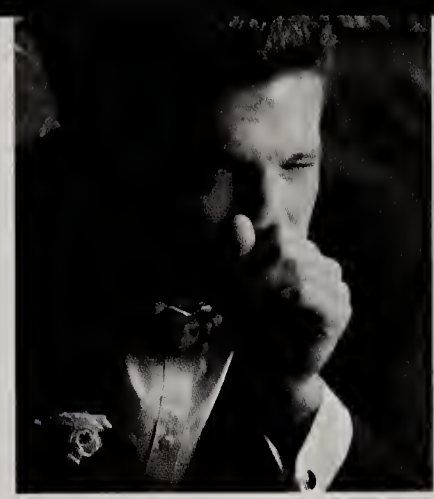
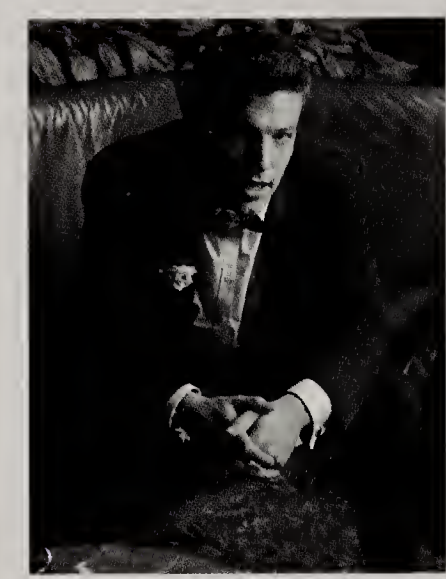


Eventually I think we had close to 1,200 and probably played only five or six. It's kind of a Napster equivalent. Today, people download all kinds of music they don't even listen to and don't even want. The Internet is a model of content distribution that's still up in the air. I think people would like to imagine that every [bit of content] they could ever want will be kept in some main place [on the Internet] where they can have access to it whenever they want. But there's something in the human psyche that still likes the idea of...

Holding it in your hand?

Yeah. Of aggregating stuff yourself, having your own library, your own catalog, having things at your disposal. The music business embraces this model [of physical ownership]. It's a real interesting business right now. You have something like $3.4 billion in music sales every year. Say you have 17 million people who buy music, just in real general terms. So, on average, each person spends roughly $200 a year on CDs. Right? And everyone [in the music business] is all freaked about Napster now. But I think what it points to is a new model of distribution. The music industry would make the same amount of money if they just said, "OK, look. You 17 million people who are buying CDs anyway, you give us $200 as an annual subscription fee, and you can have all the music you want."



No limits?

Unlimited access all year round. What will end up happening is that people will use and download and listen to roughly the same amount of music that they already do—with the exception of a few junkies. [The music companies] would be making the same $3.4 billion, but they'd actually turn a bigger profit because their distribution costs would be lower, and all their other costs (printing the CDs and the whole thing) would also be reduced. So they would actually make more money, and the consumer would feel as though they were getting a lot more benefit. Instead of just your 13 CDs that you used to go buy for $200, now you can download 4,000 or 5,000 songs.

Also, the old-model music business is predicated on selling you a 15-song CD with one song you want and 14 songs you don't want.

Exactly.

Well, now they don't have to do that, so it's a better business. That's the idealized version of where the Internet could take us. You actually could bring in a larger consumer base because it might be enticing to people [who would otherwise] buy only one CD. They might spend the whole $200 because they'd figure, "Wow, look what a value it is." People love perceived value.

What about film? Would the same model work in distribution?

I'm not sure. There are so many more zeros and ones in film files, as opposed to music files. Nobody really knows. You can get movies over the Web now, but even with a fast connection you still have to leave the computer on overnight. And the quality is not very good. What's amazing about [broadband] sites is that you think, "Wow, this is happening over the Web!" I mean, if you saw that picture on your TV, you'd take your TV back to the store.

My theory is that the film model will end up being video on demand. Say you want *Seinfeld*. The old model—sandwiching advertisements between things that people want to watch—goes away with on-demand viewing. So you'll see two [changes in the revenue model]: a shift to advertising that's included in the concept. Starbucks, say, will pay the *Seinfeld* producers X billion dollars to have Jerry Seinfeld drink Starbucks, and only Starbucks, and that's the only coffee that's ever mentioned. Right?

Right. Rampant product placement.
The second revenue stream is going to come from subscriptions and fees where you pay to get access to the *ER* library. In other words, you can watch any episode of *ER* anytime you want. The new one will still come out every week and premiere Thursdays at 8 p.m. So there will still be some appointment television. And that will be like the premium service, so there's still some added revenue for producing new stuff.

I think there will also be packages. There will be packages of a half-dozen shows or 10 shows, or maybe even the studios will have packages.
I don't see why not. I don't see why you couldn't go directly to Disney or Miramax. They'll end up cutting out some of the cable companies and satellite providers and networks. But those people will still get their revenue because they'll be the distributors, in a sense; they'll have the pipes and the infrastructure and the mechanism to deliver [content]—which Miramax and Disney are not really in the business of doing.

Right. But with the cost of one Jerry Bruckheimer film, they could be.
Yeah, I suppose. Although, actually those costs could be pretty substantial once it's opened up to a competitive market. Look at the cellular market right

now as companies jockey toward the idea that cell phones will be part of this [communications media] convergence trend. The cost of customer acquisition right now is inflated to between $1,000 and, in some cases, $10,000 because the [contenders] want to establish big footprints. They're spending these enormous amounts of money just to position themselves to be providers because they see such a huge source of [potential future] revenue.

OK. But what about the creative artists? Where do they fit in this equation?

I think people [who create content] are getting too alarmed. There's consumer demand for content, and there are people who make their living providing it—whether it's music, art, movies or comedy tapes. There will always be a degree of fraud. People walk out of Tower Records with CDs and DVDs that they don't pay for. I think there will always be that 3 percent to 5 percent margin of fraud that there is in general today. But, for the most part, consumers have money to spend, and they'll spend it. And [creative] people will see that they get a piece of that money. It will just be a different way of generating it from selling shrink-wrapped boxes.

You seem pretty tolerant of this degree of fraud. Should everyone just swallow it?

Well, we already do. There's fraud in the credit-card business. People sneak into movies. People steal tapes. The retailers absorb some of that fraud, but it's really the consumer who absorbs it because [retailers] jack up their prices a little bit. Everybody takes a little bit of the hit. Fraud is always going to exist. But if you can provide people with something they want, they'll pay a fair price for it. The average American isn't going to [become a hacker]. That's just too Byzantine to get into. And so we won't see some wholesale shift to electronic looting or something.

Have you used Napster?

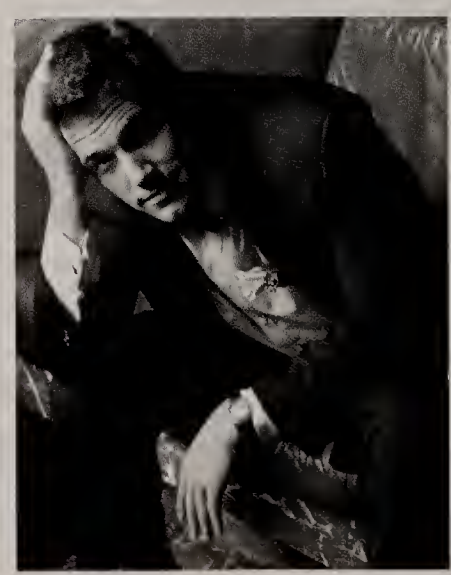
Yeah, I download music files off Napster. But I haven't stopped buying CDs. I use it more as a way of previewing the music. It's still sort of cumbersome to file it onto a CD. And I'm still spending a bunch of money if you take into account the CD writer and the [blank] CDs, and all this other stuff. I mean, if you wanted to be a professional pirater of music and go sell CDs down on Canal Street, you could. But ultimately, that's not where the business is going.

Let's switch gears and talk about how computers are changing the creative process in the motion picture business.

It's affecting everyone all along the spectrum very powerfully. One area that's real interesting is that the Avid [digital editing system] has really changed post-production. It's cut costs enormously. The standard contractual amount of editing time [mandated by the Directors Guild of America] was 10 weeks, for example. That standard is based on the old reel-to-reel editing technologies. Well, now, with digital editing, directors are almost always done with their first cut in three or four weeks. We're sitting around saying, "Should we show it to them? We still have seven more weeks." I mean, that's been really dramatic.

These digital technologies could make filmmaking accessible to a broader population of creative people. Yes?

Films cost a lot of money and take a lot of time to make—which is one of the reasons it's harder to do than write a novel, for example. [Actor and novelist] Ethan Hawke has been quoted as saying that the real James Joyces of filmmaking may not be known to us because they lack the means or the access to put it all together. But as the democratization and ubiquity of the tools needed to make movies increase, the idea is you'll see better movies because we'll have a bigger pool of talent to draw from. And that's all about reducing cost and reducing time.



What about once the film is released?

The digital distribution of movies? A huge amount of money is spent making prints and distributing them. And that apparatus is controlled by relatively only a few companies [that have the] relationships to make that possible. But you now have digital projectors in some theaters. The most recent *Star Wars* movie was tested on a [handful of] digital projectors across the country, and the tests were pretty good. I went to a screening in Burbank, and it looked good to me.

[In the future,] you'll download the entire movie directly to the projector in the theater. So you'll be saving an enormous amount of money.

Finally, the great last bastion of filmmaking is the film itself. For hundreds of thousands of people, it's a real craft and trade—be they focus pullers, camera operators, film timers and technicians, or the [film-processing] labs. There's this huge booming business [built around these jobs]. Not to mention Kodak and everybody else who has a lot invested in the idea that passing light through a chemically prepared filmstrip and burning an image into that emulsion is the

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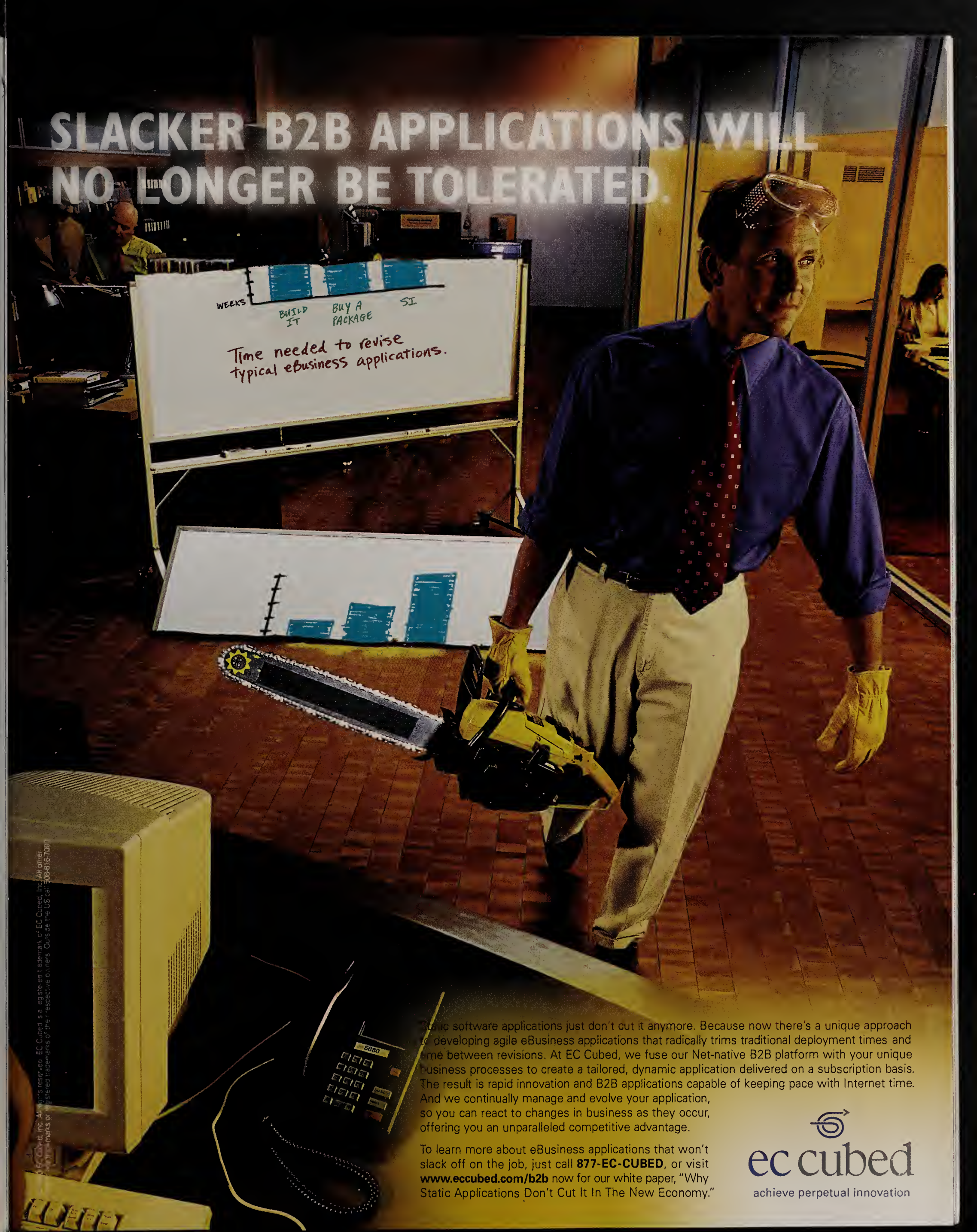

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way that this process gets done.

But digital video is fast improving in quality. The conventional wisdom is that eventually it will take over. The day will come when you won't be able to tell the difference between something shot on film and something shot on digital video. And when that happens, film will be finished. You'll just never see it again. It is monumentally more expensive than digital video—no comparison. And digital is easier and quicker, with no processing costs. And you don't lose generations [of quality in the duplication process] because you're just copying zeros and ones. So if you have no generational loss, then the whole idea of film preservation, and the timing and the manipulating, and the doing of special effects are all so much easier. The whole process is going to be revolutionized.

So when will this occur?

There's rumored to be this digital stock coming out that's supposed to look like film. They haven't gotten there yet, but they will. Moreover, audiences show an increased willingness [to accept video] because of their exposure to other formats. People watch so much television that they are willing to look at something with a little lower quality. Maybe they're not cinema enthusiasts, so they don't notice that the contrasts and the grain and the image aren't as good.

The Blair Witch Project is really a good example of that. Incredibly low cost, literally impossible to even make a movie for that budget on any film stock. Another factor driving that boom is the proliferation of short media presentations on the Web. It really looks like dog shit, but it shows you that people care more about what's being said and how it's being said than they do about how it looks. It's kind of like *Chasing Amy* (a film early in Affleck's acting career). It was this real sort of dingy looking, very rough 16mm film. But it did fairly well at the box office because the story was interesting enough.

To say nothing of the acting.

Right. So the convergence of all these trends means that, in my career span—which, for any actor can be relatively short—I will probably see the end of film. That kind of makes me sad. It's sort of like saying goodbye to the internal combustion engine. I mean, if they made a really great electric engine, I guess it would be nice; it would be quiet, and it would be clean. But I certainly have a romantic attachment to the ballsy sound of a V-8. And likewise to the way light looks when it's passed through film and projected.

Art Jahnke struggles to come to grips with the fact that his son's childhood playmate grew up to be a rich Hollywood big shot. Send condolences to *ajahnke@darwinmag.com*.

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BUSINESS PARTNER NETWORKS

Getting in Touch with Your Inner Voyeur

New technology can help you know your customers right down to their vacation destinations, their reading habits, their prescription drugs and the roots of their hair. Should you invest in such technology? This story will help you decide.

BY MEG MITCHELL

IN A SMALL TOWN IN ANYWHERE, USA, a man eats his breakfast every day at Lulu's Diner. He spends his $3.95 there—and not at the restaurant across the street or the new chain out on the highway—because the waitress knows he likes one of the yolks broken but not the other, butter not margarine, his coffee black. Why go elsewhere?

The simple premise that keeps that customer at Lulu's—get to know what your customers want, then give it to them—has been edging closer and closer to technology. And the result—personalization—is something analysts and vendors from here to eternity have been quick to label the next big thing. But personalization, like microbrews, comes in many varieties, including greeting customers by name as they sign on to a site, targeting e-mails with special promotions and altering homepages so that different users see different displays. And if you peel away the hype and step back from the flashy technology, a couple of questions remain: Does every customer really want to be a Norm in his own private Cheers? And even if the answer is yes, is personalization technology really worth your while?

Maybe, but just as likely, maybe not. So the challenge for companies that have not yet joined the personalization throng is this: to draw a careful line between serving the customer and offering services the customer doesn't really want or that won't make the customer more loyal. And then to fall on the right side of the line.

ILLUSTRATIONS BY JOHN KACHIK

Drink Like Bob
Bob
How Did She Know?
BOB'S PICKS
Luhi's DINER
Try
BOB'S EGGS
New
JK

You Don't Know Me, Buster

Personalization technology—which profiles customers either with their input and consent or else inferentially (often invisibly), through their behavior or buying histories—offers a more precise way to match products or services to likely buyers. Its rise to prominence occurs now for a number of reasons.

First, the advent of the Web has led customers to expect a level of service from e-commerce at least as high as they would get by dialing a call center or shopping through a catalog. "The possibility of that dialogue raises the expectation among customers," says Frank Ingari, founder and chairman of Wheelhouse Corp., an e-services provider in Burlington, Mass.

"The art of the possible has been transformed," agrees Marc Singer, a principal at McKinsey & Co. in Redwood City, Calif., who notes that the Web offers the customer the opportunity to engage in the personalization experience—this is who I am, this is what I like—rather than sit passively on the receiving end.

But even as the Web expands possibilities, it limits them, and that presents real challenges to companies wrestling to find the best ways to reach their customers over the Web. "Shopping in the real world is a rich, 3-D experience," says Steve Larsen, senior vice president of marketing and business development at Net Perceptions, which makes collaborative filtering software (see "Some Terms Explained," Page 88). "When you reduce that to a 14-inch screen, you eliminate a lot of that experience." Businesses are now required, rather than merely encouraged, to make up for the restrictions of a new medium.

Add to those factors the fleeting loyalty among Web customers—"It's more difficult to gain trust online and far easier to lose it," says Larsen—and what emerges is a rich-soil ideal for personalization technology, with plenty of hype and money to fertilize it. A March 2000 report from Forrester Research in Cambridge, Mass., says companies spent an average of $24 million on e-commerce infrastructure in 1999 and will spend $41 million in 2000. While it's hard to separate exactly how much of that personalization accounts for, its growing popularity suggests it's a sizable chunk. And in the same report, personalization ranked third on the list of the most important software purchases for the companies surveyed.

CASE STUDY

BMW of North America

WWW.BMWUSA.COM

INDUSTRY: Automotive

GOAL: To provide a personalized community for BMW owners that secures their loyalty; to convert nonowners into first-time buyers.

THE CUSTOMER GIVES: No information unless he wants to be contacted by a dealer. Owner's Circle members cough up name, vehicle identification number and date of purchase.

THE CUSTOMER GETS: To build cars to their own specifications based on information about model types and driving preferences, then can save preferences to return to or ask to be contacted by a dealer. BMW owners can join the exclusive Owner's Circle, which lets them track scheduled service and receive mileage reminders and other information about the care and feeding of a BMW.

STICKINESS FACTOR: BMW owners are notoriously loyal to their cars; the hope is that they will feel the same way about the site and return often. And new buyers who might be intimidated to shop for their first Bimmer through a dealer can do the legwork on the Web.

WHAT ABOUT PRIVACY? Site visitors can opt out of anything; BMW promises never to sell its coveted customer list to anyone.

CHALLENGE: To use personalization in a manner that doesn't offend customers who are traditionally opposed to a hard sell; to make the site personal but not intrusive.

Suppose You're Not a Bookstore?

For obvious reasons, personalization technology has sown its seeds most widely in the retail industry, where shoppers move around often and leave behind a trail of browsing-and-buying crumbs that marketers can collect and analyze. Most people who have lived on this planet for more than a minute know about Amazon.com's book recommendation service, which uses collaborative-filtering technology to match customer profiles with those of other like-minded customers and recommend books accordingly. In a brick-and-mortar world ruled by superstores, Amazon.com has found a way to do what the nearly extinct local bookseller used to do—get to know customers and then help them get to know books.

Does personalization make sense for every business? Probably not. But the fairly narrow set of uses to which personaliza-

CASE STUDY

Kaplan/eScore.com

WWW.ESCORE.COM

INDUSTRY: Education and training

GOAL: To garner lifelong customers for Kaplan's games, educational products and learning activities.

THE CUSTOMER GIVES: Name, e-mail and basic information about their child, including educational or developmental information, in order to register.

THE CUSTOMER GETS: Profiles of children and offers for relevant products and services. Parents can take tests to assess their parenting abilities and can direct specific questions to experts.

STICKINESS FACTOR: If Kaplan can convince parents the site will help them in different stages of child rearing and sell them the right products at the right time, they'll want to come back. After all, it takes a long time for a kid to grow up.

WHAT ABOUT PRIVACY? A very touchy matter when it comes to children. Kaplan shares aggregate information with outside sources but does not attach names to it.

CHALLENGE: Using the Web to reach across age segments, broadening the image of Kaplan as more than a test preparation company.

tion has been put so far is certain to expand. In the meantime, you shouldn't sign any big checks for the necessary technology without first asking some key questions.

Do I know what my customers want? The first step in assessing personalization is to take a close look at the information needs and privacy concerns of your own industry's customer base. Sensitive health-care data is just that—sensitive. Few people want their Viagra prescriptions posted on the bulletin board down at Lulu's. But an online pharmacy that lets Grandma's caregiver know when her blood pressure medication is running low is performing a valuable service. People are similarly guarded about financial data, but if the information an online bank has about them means they can view accounts online in a secure environment and receive offers for relevant services, so much the better.

Do I know what I want? McKinsey's Singer figures that around 90 percent of visitors have left a website by the time Page 3 comes along. If your goal is to convert as many as possible of those 90 percent into first-time buyers, you need to concentrate on designing the content of those first few screens by figuring out who is visiting your site. A bank with an online presence, for example, will want to lavish less attention on a college student with a beer-money savings account than on a thirtysomething who might be shopping for mutual funds or a home mortgage. Personalization technology could allow a site to segment those potential mutual-fund buyers and carry them—invisibly—through a different buying experience.

Can I integrate? "Personalization needs to be part of an overall channel-management strategy," says Randy Covill, senior analyst for e-commerce applications and strategy at AMR Research in Boston. "It's a wonderful opportunity, but only if you can relate it to the rest of your channels." And there's the rub. Pure dotcoms, starting out with a fresh customer database and brand-spanking-new information, might have an easier time. Established companies with multiple channels—call centers, brick-and-mortar stores, mail-order catalogs—could alienate customers by keeping them in unlinked silos. What if a music fan orders six CDs over the Web and a week later receives a phone call on a Saturday afternoon from the same company wondering why he hasn't ordered from the catalog in months? Besides annoying the customer, the company has just flushed call center resources down the toilet.

Can I afford it? There is an ever-growing collection of vendors ready to sell you their personalization wares, some of which come with hefty price tags. But you may have what you need already; the longer you've been collecting customer data in any form, the more ready you may be to turn it into an overall personalization strategy—as long as you have the necessary expertise in data warehousing and data mining (see Page 88 for definitions) to help you analyze what you've been collecting. If not, it's worth looking into application service providers (ASPs) that will collect and handle your customer data on their servers. And a new crop of data brokers, which collect customer information from outside sources and then sell it back, offers another option.

Can I be unobtrusive? Ask people if you can watch where they go on the Web, and you are sure to give them the willies. But if you observe from a distance and then give them something in return, they are likely to thank you by coming back. "If

you make it as easy as possible to get from Point A to the information they want, you're doing a good job," says Seamus McAteer, a senior analyst at Jupiter Communications. Wheelhouse's Ingari agrees: "I've never heard anyone complain about Amazon.com recommending books. On the other hand, everyone despises being called at home during dinner." The key here is to run fast without making it look like you're breathing hard.

Can I give my customers an out? Tell customers what you can do for them, but give them the opportunity to opt out if they're not interested—the "Thanks, I'm just looking" of the offline world. Letting that decision rest with the customer is crucial to the success of any personalization strategy.

Risky Business

Even for companies that answer these questions affirmatively and decide that they and their customers are ready for personalization, a few caveats remain. First comes the obvious issue of privacy. The prospect of all this free-floating customer data raises the hackles of privacy advocates (see "Privacy, Schmivacy," Page 90) and of customers who see something inherently voyeuristic about being watched while they surf.

But privacy incursions may ultimately be dwarfed by a much subtler danger—one that bedevils many adventures in technology: putting way too much stock in the technology itself and not enough in the underlying business sense that drives it. Personalization is no panacea. If your visitors are not going to open their wallets, there's no point in personalizing your business for them. You're running a company, not hosting a free party. So while it's important for visitors to appreciate their experience on the site, their level of enjoyment ranks second behind whether they click the

CASE STUDY

GreatCoffee.com

WWW.GREATCOFFEE.COM

INDUSTRY: Gourmet coffee retailer

GOAL: To turn first-time browsers into buyers.

THE CUSTOMER GIVES: Nothing. The company uses Angara's E-Commerce Targeting Service, which delivers variable content to visitors based on their geographic location.

THE CUSTOMER GETS: Homepages personalized to his area (a visitor from Taiwan might get information on international shipping; one from the Bay Area might get a chance to win San Francisco Giants tickets).

STICKINESS FACTOR: The industry average for reordering within six months is 5 percent; GreatCoffee's is 63 percent. Plus, coffee is addictive.

WHAT ABOUT PRIVACY? Customers don't need to give up info until they're ready to buy; once they do, the company maintains a strict privacy policy and insists that its partners do the same.

CHALLENGE: Focusing on customer service after the first purchase to keep reorder rates close to conversion rates.

Some Terms Explained

A GLOSSARY TO HELP YOU NAVIGATE THE ROADS OF PERSONALIZATION

Collaborative filtering: Software that aggregates customer information and makes recommendations based on the preferences of like-minded customers

Rules-based engines: Use Boolean logic to map customer profiles to content so that customers can get specials based on factors like where they live or what they bought last time

Cookies: Computer files that assign anonymous numbers to Web users, making it easy to track their movements around a site. Site administrators aggregate and analyze cookie information, which can be useful in evaluating site effectiveness as well as in identifying and greeting repeat visitors. It is possible for individual users to configure their browsers to disable cookies, but few take the trouble to learn how to do this.

Clustering: Observing customers' online behavior and placing them in similar behavioral groups, then inferring what a group member will do or buy next based on the retail behavior of the other group members

Sticky sites: Sites that manage to keep customers or get them to come back once they've left

Data brokers: Third-party companies that collect and disseminate customer data, culled from a variety of sources like software registration and publicly available information

Real-time personalization: Reacting to a user's behavior as it happens rather than going back and analyzing it later

Opt-in personalization: Letting the customer say yes or no to letting a company use personal information, with the opportunity to opt out at any time

Data warehouse: A store of data that has been collected and organized for the purpose of being analyzed

Data mining software: Software that discovers previously unknown relationships among data

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Privacy, Schmivacy

A LOT OF PEOPLE HAVE A LOT TO SAY ABOUT PRIVACY ON THE WEB. BUT IS ANYBODY REALLY LISTENING?

AN APRIL 2000 REPORT released by Cyber Dialogue, an Internet customer relationship management company in New York City, found that 21 percent of Internet users don't know if their browsers are set to accept cookies or not. Even so, 71 percent offer up personal information in exchange for personalized content. The survey also found that more than 80 percent of users don't mind providing personal information such as name, level of education, age or hobbies; only 59 percent are willing to share their household income; and a mere 13 percent feel safe divulging their credit card numbers.

But privacy advocates still quake at the notion that Web consumers leave a lot of information behind that they might not even know about. For Jason Catlett, president of Junkbusters Corp., a Green Brook, N.J.-based company that keeps a close eye on privacy infringements, it's a simple case of mathematics. "You can only fill out so many warranty cards in a year, but you can leave thousands of electronic footprints behind in a day," he says. Most people, he adds, do not even understand what cookies are or what they do. And while sites that rely on cookies to collect user information claim that they preserve visitors' anonymity by assigning them a random number, once a browser becomes a buyer and pulls out a credit card, the cookie number gets a name attached to it. Then—zing!—the marketers move in.

One answer to the privacy conundrum, already adopted by many companies, is to write and post a privacy policy, letting customers know exactly where their information is headed. "But most privacy policies read more like privacy disclaimers. They want to be deliberately vague so that the companies can sell info without violating the policies," says Catlett.

Another solution—most fervently advocated by companies with a stake in unfettered data collection—is self-regulation. In April, 26 companies came together to form the Personalization Consortium, an advocacy group with the goal of promoting responsible use of technology. Members include American Airlines, personalization software vendor BroadVision, Peppers and Rogers Group (a marketing consultancy) and PricewaterhouseCoopers, among others.

Sun Microsystems CEO Scott McNealy has another idea. McNealy made headlines last year with this now-famous remark: "You already have zero privacy—get over it." Chances are that many Web customers have probably already heeded his advice, but it's early yet. Buried beneath the e-commerce battlefield, plenty of privacy land mines lie in wait. And companies better step carefully.

–M. Mitchell

"buy" button and become loyal customers.

Landsend.com offers female buyers an online mannequin they can build to their own measurements and use to try on clothes. That may make for a good time, but 80 percent of site visitors already buy from the Lands' End catalog. Does the addition of some admittedly cool technology mean people who traditionally don't buy from Landsend.com will do so now? Maybe not. But, wait.... If the virtual mannequin leads to more accurate sizing and, hence, fewer returns to process, maybe the ROI (to say nothing of customer satisfaction) goes up.

And for companies or industries that are not traditionally customer-focused, implementing personalization means a dramatic shift in business methods. "At the basic level, what's driving this is a change in the economic constraints in the way of

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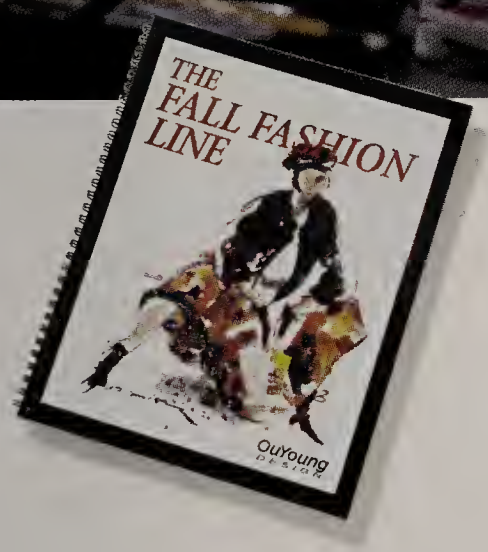

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doing business," says McKinsey's Singer. "The old constraint was the scarcity of space and bandwidth. Now shelf space is unconstrained; the real constraint is consumer attention."

Nike, for example, is a company that has historically competed and marketed largely on the basis of brand and image—much like all of its competitors in the footwear and sporting goods industry. When the company decided to offer visitors to its site the opportunity to build customized shoes [see "Sneaker Attack," *Darwin*, June/July 2000], the move signaled a change in focus that may ultimately ripple through the industry. Surely such a shift doesn't happen overnight, but it can be worth the exertion, since it has the potential to catapult Nike ahead of the pack.

But even after you've decided the investment is worth making, the sheer number of technology offerings can overwhelm anyone into a bad decision. "The challenge for marketers trying to do [personalization] is that there is an infinitely long list of things you can do to personalize," says Singer. "The real issue is where is the economic leverage."

No one product does everything (though many claim to), so the challenge lies in wading through an increasingly thick stack of vendor proposals to settle on something that delivers the right benefit for the right level of investment. Companies that aren't clear about where the economic returns lie in relation to what they spend on personalization could end up in the poorhouse before even one customer has noticed their attentions.

How much is a lot to spend? According to Brad Allen, vice president of advanced technology for personalization vendor Be Free, that depends on how far you want to take your personalization strategy. To stick a toe in the water, says Allen, is likely to be a $500,000 investment. (Coincidentally, he notes, Net Perceptions and Wheelhouse ran a contest with a prize of $500,000 worth of personalization software and services; in June, OshKosh B'Gosh was announced the winner.)

A company with big ambitions and intent on assembling its personalization capability internally can expect to invest "from single- to double-digit millions just to get into it," says Allen.

Be Free, whose offering is based on the ASP model (see "When a Stranger Calls," *Darwin*, June/July 2000), charges a flat monthly fee to "rent" personalization capabilities (fees start at $5,000 a month). Allen happily positions Be Free as the low-cost alternative to the kinds of homegrown infrastructure only multimillions can buy. "And you have to remember ongoing maintenance," he says, placing that burden at around "three full-time equivalents annually" for even a modestly scoped system.

It's also worth remembering that these technologies—and their adroit application—are still in their infancy, relatively speaking. Lynne Harvey, a senior analyst at the Patricia Seybold Group in Boston, thinks very few companies have actually achieved a "360-degree view" of the customer—defined as engaging in a relationship to learn as much as possible about all sides of the customer. "Some people think [personalization is] just a strategy of peppering any content with additional messaging" that recognizes the customer or adds a personalized greeting.

But it can and should be more than that. Jupiter's McAteer agrees: "If Amazon.com is supposed to be state of the art, we've got a long way to go." Selling online is not just about personalized content, it's also about offering strong customer content and about making sure you can keep your customers coming back again and again. Fancy technology isn't going to do that on its own; it needs to be coupled with a customer strategy to build long-term loyalty. "Personalization is no substitute for love," notes McAteer—sage advice for companies trying to balance customer needs with economic realities and the promise of technology. And while it might make for a pretty good one-night stand, a company lacking the right vision and a strong customer commitment could end up disappointing someone in the morning.

CASE STUDY

PlanetRX.com

WWW.PLANETRX.COM

INDUSTRY: Health care

GOAL: To capture the burgeoning online health-care market by replacing the old-fashioned pharmacy on the corner with an online service that dispenses advice and wisdom as well as prescriptions.

THE CUSTOMER GIVES: As much as he wants: health and insurance information for prescriptions, less for general over-the-counter shopping.

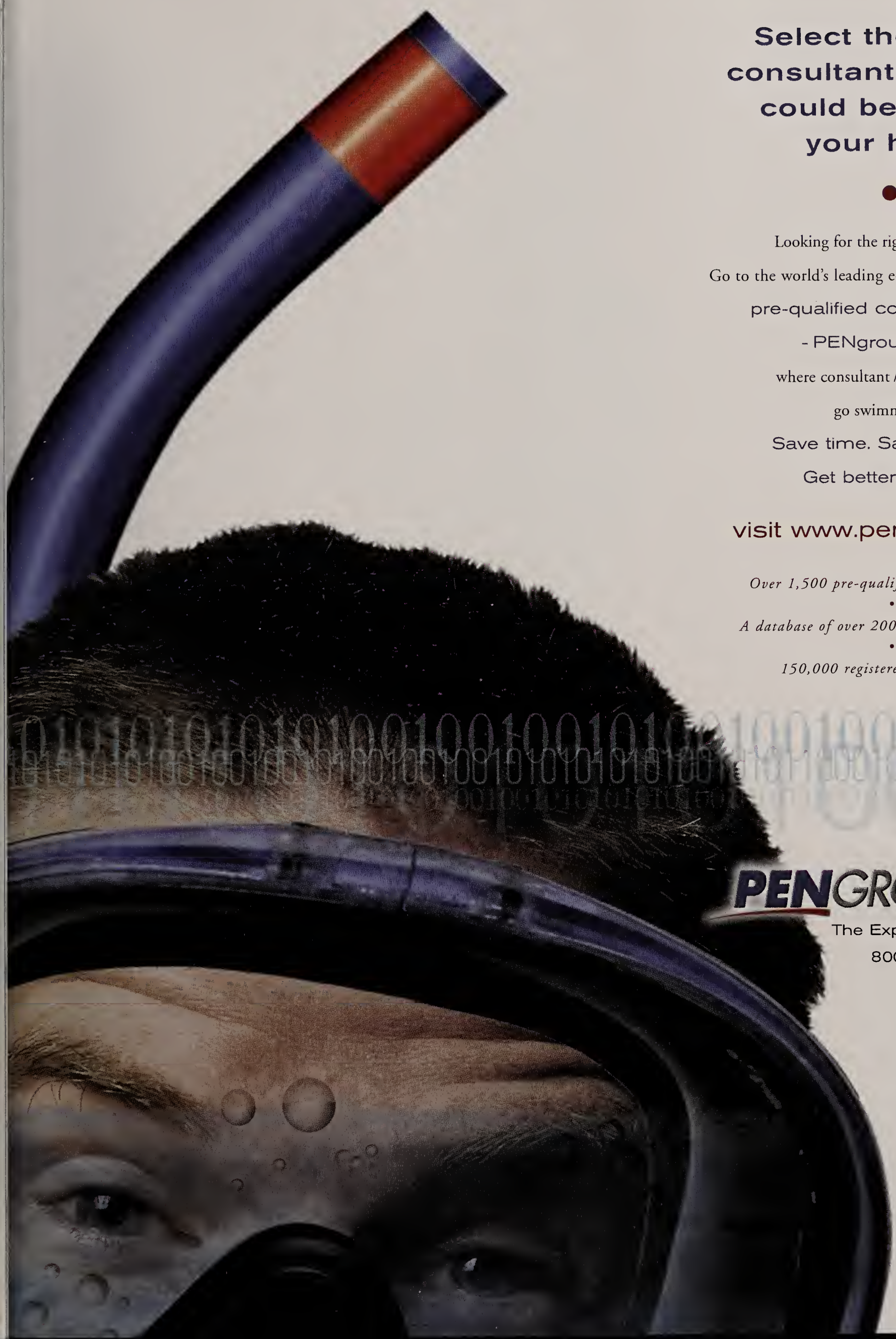
THE CUSTOMER GETS: E-mail reminders for prescription refills, access to online pharmacists and a secure, password-protected environment in which to receive answers to personal questions. Visitors can also gain access to specific disease sites with communities for caregivers and patients.

STICKINESS FACTOR: Loyalty is likely; customers won't want to impart sensitive health-care data to too many parties, so they'll stick with the company that does it right.

WHAT ABOUT PRIVACY? Of the utmost importance: "Privacy is our lifeblood," says Matthew Naythons, publisher and vice president of editorial.

CHALLENGE: Safeguarding some of the most sensitive data in the world and overcoming customers' natural resistance to talk health with someone they can't see.

Got a beef about personalization? Send it, along with your name, SSN and all of your bank account information, to Senior Writer Meg Mitchell at *mmitchell@darwinmag.com*.



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As industry giants team up to build business-to-business marketplaces, they must convince their suppliers—and the feds—that they plan to play fair and square. By Sari Kalin

PHOTO BY MARK LUINENBERG

BUILDING GOOD FENCES: (from left) Alice Miles, Peter Weiss and Alan Turfe represent Covisint's Big Three automakers.

The Big Three automakers are doing something that would have been considered unthinkable—and maybe even illegal—30 years ago. So are five major airlines, six of the largest meat and poultry processors, and dozens more groupings of corporate Goliaths.

They're building their own business-to-business marketplaces—industry-specific online malls filled with all of their suppliers, where they can shop or haggle until the price is right. Thirty years ago, big buyers didn't have the technology to band together and bring their suppliers under one virtual roof. And 30 years ago antitrust regulators were so wary of competitors working together that they wouldn't have dared try.

Today Internet technology has made it easier for competitors to connect—and to corral their suppliers. But antitrust suspicions linger like cigar smoke around a backroom deal: Will these marketplaces lead to economic good for all members of the supply chain? Or will they let buyers collude to put the squeeze on suppliers?

The feds are scrambling to answer these questions. Until they do, any executive weighing whether to start or join a marketplace faces a tough decision: Jump in and hazard the scrutiny of the Federal Trade Commission (FTC) or the Department of Justice or hang back and miss a chance to dramatically cut costs. "There's a tension between the business benefits and the lurking antitrust risks," says Hillard Sterling, an attorney specializing in antitrust and technology issues at Gordon & Glickson in Chicago. "To secure the former, you must face the latter."

Marketplaces lure buyers with the promise of lower costs and increased efficiency. Online auctions, for example, let companies buy surplus materials cheap; reverse auctions let suppliers bid against each other to fulfill buyers' contracts for the lowest price. Searching multiple suppliers' catalogs online is easier than poring over printed ones; sending purchase orders online is more efficient than faxing them. Long-term, marketplaces also promise to be forums for communicating with suppliers about inventory levels and product development schedules, which could in turn help companies tighten up inventory management and decrease production times.

For sellers, marketplaces offer a mixed bag. By joining a marketplace, suppliers can reach a larger pool of buyers and streamline their communications with them. But they also open themselves up to price pressure and commoditization, and only the most efficient suppliers will survive this heated competition. "In the past, there was enough inertia in supply chains that even a moderately inefficient supplier could often hang on to its customers because of ignorance and switching costs," says Erik Brynjolfsson, a professor at MIT's Sloan School of Management. "[In the future,] suppliers that succeed are going to be the ones that have lower costs and higher quality."

Industry giants seeking to form their own marketplaces face more than regulatory hurdles. There's no guarantee that they will be able to agree on marketplace strategy and direction; after all, they are competitors. They need to play catch-up with independent Web startups that have already launched marketplaces; Freemarkets, for one, has conducted more than $5 billion in reverse auctions and saved more than $1 billion for its buyers.

The giants also need to overcome huge technology integration hurdles to handle online transactions and offer the financial settlement and shipping services needed to complete deals. "Historically, they are not great at creating and using new technologies," says Steve Kafka, an analyst at Forrester Research. (Many Web startups are also far from offering such seamless services—see "B2BHype.com," Page 28.)

Despite the hurdles, many big buyers seem undaunted. GM, Ford, DaimlerChrysler, Renault and Nissan are developing a marketplace and setting it up as a separate company, called Covisint (KO-vis-int), to harness their combined $300-plus billion in purchasing power, plus that of their suppliers. Their plans were the first to come under scrutiny by the FTC, and organizers do not expect the marketplace to launch before September. American Airlines, British Airways, Continental Airlines, United Airlines and U.S. Airways are forming a marketplace for buying jet fuel, plane parts, maintenance and other airline-related goods and services—what they estimate will total $32 billion in spending a year. Sears and Carrefour are developing a marketplace for retailers to which they plan to bring their $80 billion in spending; Kmart has partnered with 10 other big retailers to develop a competing marketplace. Six of the largest meat and poultry processors—Cargill, Farmland Industries, Gold Kist, IBP, Smithfield Foods and Tyson Foods—are also forming a marketplace for meat and

TIME WILL TELL: As a Tier 1 automotive supplier, Rajesh Shah expects to be able to choose the best deal from competing marketplaces.

PHOTO BY JOHN SOBCZAK

poultry buyers and sellers; Sen. Paul Wellstone, a Minnesota Democrat, has asked the Department of Justice to review their plans, out of antitrust concerns.

But some big companies have resisted partnering with their competitors. Sun Microsystems doesn't plan on joining the Hewlett-Packard–led marketplace for buying electronic components, according to a recent Merrill Lynch report, because it views its list of vendors as "top secret"; Sun runs its own private online auctions for suppliers. GE Plastics created its own online purchasing and information-sharing site, GE Polymerland, more than a year ago. When Bayer, Dupont and other resin manufacturers decided to form a marketplace earlier this year, GE was not invited; but even if it had been, it wouldn't have been interested, a spokesman says. Meanwhile, Toyota was awaiting the outcome of the FTC's investigation before deciding whether to join Covisint.

From an antitrust point of view, the automaker and other industry-led marketplaces are noteworthy because they bring together powerful groups of buyers. Historically, the government has had to worry more about sellers cooperating to keep prices artificially high—restricting the number of widgets they make, dividing up sales territories so that each faces less competition and so on. But the Internet has lowered the cost of communication so dramatically that it makes it easier for buyers to connect—and easier, potentially, for them to collude to keep prices artificially low. The legal term for the former is monopoly, while the latter is known as monopsony.

Why is monopsony just as bad for competition as monopoly? MIT's Brynjolfsson says buyer cartels may initially realize some gains from using their increased bargaining

Buy Power

NEW ANTITRUST GUIDELINES SPELL OUT THE DANGERS OF JOINT PURCHASING

Competitor collaborations may involve agreements jointly to purchase necessary inputs. Many do not raise antitrust concerns and indeed may be pro-competitive. Purchasing collaborations, for example, may enable participants to centralize ordering, to combine warehousing or distribution functions more efficiently, or to achieve other efficiencies. However, such agreements can create or increase market power (which, in the case of buyers, is called "monopsony power") or facilitate its exercise by increasing the ability or incentive to drive the price of the purchased product, and thereby depress output, below what likely would prevail in the absence of the relevant agreement. Buying collaborations may also facilitate collusion by standardizing participants' costs or by enhancing the ability to project or monitor a participant's output level through knowledge of its input purchases.

EXCERPT FROM *ANTITRUST GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS*, ISSUED BY THE FEDERAL TRADE COMMISSION AND THE U.S. DEPARTMENT OF JUSTICE, APRIL 2000

power to squeeze lower prices out of suppliers. But if prices fall too low, suppliers don't have incentives to innovate or improve quality. And if suppliers don't get enough of a return on their investment, they may choose to exit the market, leading to parts shortages that could cause manufacturers' prices to rise. "It's ironic, but the buyer can have too much bargaining power," Brynjolfsson says.

Even with understandable concerns about monopsony, the FTC's investigation of Covisint may seem like the knee-jerk reaction of trustbusters on overdrive; after all, Covisint had yet to process a single purchase order when the feds started sniffing around. But in fact, Covisint's very existence is a sign that antitrust regulators are far more tolerant of competitor collaboration today than they were in decades past. Today the FTC recognizes that some good can come out of competitor collaborations, such as reduced ordering, warehousing or distribution costs, or improved quality, says William Kovacic, antitrust expert and professor at George Washington University's law school. But the agency still needs assurances that such collaborations don't become forums for manufacturers to fix prices, share product development information, coordinate marketing strategies or other anticompetitive no-nos.

In April the FTC and the Justice Department issued antitrust guidelines for competitor collaboration. They do not address B2B marketplaces specifically; the agency is still gathering information on how marketplaces work and what antitrust issues they raise.

Legal experts advise companies to make the operation of the marketplace completely separate from the collaborators' main business activities. They should also set up organizational walls so that only purchasing and technology employees interact with the marketplace; employees involved in marketing and price-setting decisions should not have anything to do with the marketplace. The marketplace's auction and purchasing technology must preserve the anonymity of the buyers and make it impossible for competitors to see who is buying which products at what price.

The automakers say they have gone to great lengths to set up just these kinds of barriers. The three executives from DaimlerChrysler, Ford and GM who are leading Covisint's development—Peter Weiss, Alice Miles and Alan Turfe—have been relieved of their duties in their home organizations, Weiss says. They have been putting in 14-hour days on neutral turf—a rented building not owned by any of the automakers—just north of Detroit. And the Covisint offices are strikingly barren of automaker paraphernalia. "We're trying to have a firewall between us and the home organizations in order to avoid any collusion issue with the FTC," Weiss explains. Covisint's technology will also keep competitors' dealings on the exchange private. For example, GM and Ford would use the same technology to conduct reverse auctions with their suppliers, but GM wouldn't be able to watch Ford's auctions, and vice versa.

The FTC review seems to have slowed Covisint's development. The automakers initially planned to launch the exchange by June. There had also been talk of a Covisint IPO some time this year, but that, too, appears unlikely. Under the shadow of the inquiry, Weiss says, it has taken longer than anyone expected to find a permanent CEO.

But in some ways, Weiss says, the FTC scrutiny has changed Covisint for the better. The regulators have forced them to spell out every detail "to the nth degree" of how the marketplace will operate and interact with their home organizations—the type of detailed business-process planning that might have happened in a less structured way had they been racing to get the marketplace running by June. And "the external pressure...is making us work closer," Weiss says. "We don't have any time to infight, so we make a decision and move on."

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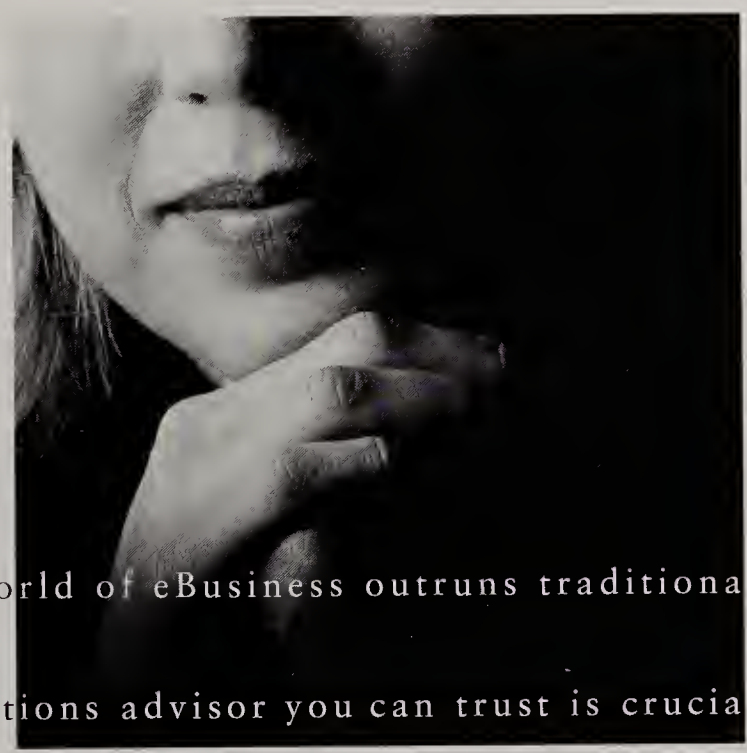

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Covisint's leaders insist that their goal is not to gang up on suppliers and beat down their margins; purchasing is only a small part of what they plan to do online (see "High-Octane Dreams," Page 104). "The prices are already pretty damn low," Weiss explains. "But the waste is still in the system, and the waste can only get out if we standardize our communication with our suppliers."

Some suppliers take a much gloomier view of what Covisint and its online auctions will do to their already slim margins. Another fear is that if automakers can track suppliers' purchasing costs for raw materials, they will squeeze supplier margins even tighter. "[Covisint] could force inefficient suppliers to operate more efficiently," one anonymously quoted Tier 1 supplier said in a Merrill Lynch Research report, *Automotive Industry and B2B E-Commerce.* "[Automakers] are going after any incremental supplier margin that is revealed." Yet other Tier 1 suppliers have apparently overcome any qualms and announced they plan to work with Covisint; among them, Delphi Automotive, Johnson Controls and Meritor. "As far as we're concerned, our industry has been in an auction atmosphere for 20 years," says Mike Suman, vice president of e-business for Johnson Controls' automotive group. "That doesn't bother us at all. If we can find value and cut costs, why wouldn't we be interested in doing this?" Merrill Lynch Research notes that Tier 1 suppliers make products that are highly engineered and not likely to face serious price cuts; Tier 2 suppliers--those who make commodity products—have much more to fear.

PLEASE DON'T SQUEEZE THE SUPPLIERS: Antitrust expert William Kovacic sees the good in competitor collaborations: They can reduce costs and improve quality.

PHOTO BY DOUG BARBER

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High-Octane Dreams

THE AUTOMAKERS HAVE A BROAD VISION FOR THEIR BUSINESS-TO-BUSINESS MARKETPLACE

Try to say it—Covisint. The name of the automakers' planned business-to-business marketplace doesn't exactly roll off the tongue. (Indeed, in an interview, one automotive supplier repeatedly and earnestly called it "Ko-VIN-cent" rather than "KO-vis-int.") But the name—drawn from the words connectivity and collaboration, visibility and vision, and integrated and international—does give some insight into what the automakers hope to achieve: Net-fueled efficiencies that can benefit the auto industry across the globe.

Initially, the automakers plan to use Covisint primarily for online purchasing and auctions. But in the future, they also want to use it to offer real-time communication between manufacturers and suppliers throughout the supply chain so that they can reduce inventory and cut manufacturing time and cost. And some day they hope Covisint will become a storehouse of information on the auto industry, one that they can analyze to spot trends. "What we're doing on the exchange is developing tools that all of us can use," says Alice Miles, a Ford executive and one of three from the Big Three that are leading Covisint's development.

The automakers weren't always singing such a cooperative Internet tune. Late last year, Ford announced it would build a marketplace using Oracle for the technology underpinnings, while GM laid plans for a rival marketplace with CommerceOne. But suppliers started squawking about having to deal with two proprietary systems. In February, Ford, GM and DaimlerChrysler agreed to what one GM executive called an "unnatural marriage." They decided to work with CommerceOne and Oracle to build an industrywide marketplace and run it as an independent company.

Since then, they have been wooing other automakers and Tier 1 suppliers to join them, with mixed success. Renault and Nissan signed right on to the venture, taking equity stakes in it, but Volkswagen announced plans to build its own marketplace with IBM and Ariba Networks. To coax Tier 1 suppliers to use the exchange for their own purchasing, Covisint is offering to give them a slice of the profits on any business they bring to the marketplace. *S. Kalin*

Ultimately, Tier 1 suppliers may not have much of a choice about using Covisint to share production schedules, engineering specifications and other information with the automakers, according to one supplier. But no one can force them to do their own purchasing via Covisint, and Covisint will have to offer them a better deal than any of the other marketplaces out there to woo their business. "There are so many of these specialist things coming up that we have a choice," says Rajesh Shah, CFO of Collins & Aikman, a Tier 1 floor and acoustic systems supplier. "If [Covisint] provides the best value, we'll pay the fee. If not, we won't."

Only time will tell whether Covisint and other marketplaces live up to buyers' dreams or make suppliers' nightmares come true. MIT Media Lab researcher Michael Schrage notes that it's theoretically possible for them to evolve in a win-win way—that is, for them to lead to lower prices for commodity components and to a "surge of innovation from [suppliers] that don't want to be trapped in a commodity exchange." But they could also evolve into "dueling cartels," where the suppliers try to compete the same way that the buyers try to compete.

It also remains to be seen how lightly or heavily the trustbusters choose to tread on the new economy's new cartels. "This is a rapidly evolving area that the agency and the FTC are just learning more about," Susan DeSanti, director of policy planning at the FTC says. Experts suspect the feds won't rush to make new regulations until they answer the question of whether marketplaces will be good for all—or too good to some. Says MIT's Brynjolfsson: "It would be wise for them to watch and learn."

Do you think B2B marketplaces are good for all? Tell Senior Editor Sari Kalin at *skalin@darwinmag.com.*

PHOTO BY MARK LUINENBERG

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talking the TALK

A walk through some of today's toughest technology terminology

A LONG TIME AGO, IN A GALAXY FAR, FAR AWAY... company executives understood their world and their place within it. With their fingers on the pulse of their companies, they knew what to watch out for. They knew their competitors. They could navigate the roads of their industries, potholes included.

Then things changed. Something new emerged. It was called technology, and it arrived in an odd vessel full of strange words and bewildering acronyms. It confused even the brightest people. Just when they thought they had the beast by the tail, the beast shifted, changed colors and escaped again.

And if that weren't enough, technology began to follow the executives home from the office. It sat down to dinner with them and their families. Executives were assaulted with technology advertisements and news reports about companies whose products they didn't understand. A suspicious thought began to sneak into their heads: Technology would begin to play a critical role in every facet of company decision making.

BY MEG MITCHELL AND TODD DATZ

ILLUSTRATIONS BY JOSEF GAST

Does this tale ring true? If it does, you're not alone. But there's good news: Only a small percentage of people actually know what they're talking about when it comes to the ins and outs of technology. The bad news is that many of them report to you.

With that in mind, *Darwin* has put together this IT primer that aims to ground you in some of the moment's key IT topics. It's light enough, we hope, to make the dreaded subject interesting, yet it's substantive enough to help you ask intelligent questions of your CIO. So sit back. Put your feet up. And let us help you.

What is CRM, and where can I buy some?

The premise of customer relationship management (CRM) is simple in a "why didn't I think of that" sort of way. Make customers happy once, and they will come back. Make them happy a second time, and they will come back again. Make them happy...well, you get the point. But despite what many CRM software vendors would have unsuspecting potential buyers believe, CRM is not a technology. It's a business strategy that means taking a long-term view of the customer in order to build the kind of relationship that sticks. By focusing on the customer relationship as a whole rather than on specific transactions, CRM proponents believe that companies can make their most valuable customers even more valuable.

For example, an auto repair shop might notify Sally when it's time for an oil change, hoping that she will return when her timing belt starts to go. A bank might keep a careful eye on a customer's life events—a new job, a marriage, kids—and send offers for appropriate financial services. Similarly, companies might begin to lavish less attention on less profitable customers to increase the resources they have for profitable ones.

But despite its rise to buzzword status, CRM isn't completely new. Customers have always been around, and so have the methods of keeping track of them. Data warehousing and contact software, which manage customer contact information, have both played important roles in CRM's development.

Great, you think. Sign me up. Well, we have a couple of caveats. If a vendor tells you or your CIO that his company offers a complete CRM solution, look carefully to see if his nose is growing. CRM isn't something you can buy off the shelf, plug in, and stand back and watch in action. You can buy parts of it, like software that lets salespeople automate how they record and track customer contacts or call center technology that allows customer service reps to view a caller's order history and offer specific products based on established preferences. But only by linking these technologies with business processes can CRM really work for you, and only by integrating front-office systems like sales and customer service with back-

office systems like finance and manufacturing can you reap the promised benefits. And that ain't always easy.

A key part of CRM's success is the premise that sharing customer information across departments makes for a better relationship between the company and the customer. But not everybody likes to share. Joe in sales, for example, might be used to having his own relationships with customers—built on years of interaction and many long dinners on the company tab. Convincing Joe that it's better in the long run if he gives up that information to Melinda in shipping may not be easy. But companies that learn how to use CRM the right way will have an advantage, especially in a wired world that makes it easy for customers to shed their loyalty.

Didn't an ASP kill Cleopatra? Then I don't want one, do I?

Well, yes and maybe. Outsourcing, or paying someone else to do work that you don't have the time or resources to do yourself, is nothing new in the world of IT. It's been more than a decade since Eastman Kodak inked the first major IT outsourcing deal, forking over $250 million to outsource its data center operations.

But over the past few years outsourcing has morphed into something new: application service providers (ASPs). And companies billing themselves as such are cropping up faster than crab grass in July.

The premise is easy enough. Instead of buying an expensive application or system that will end up costing hundreds of thousands of dollars, ASPs offer businesses the opportunity to "rent" applications or systems, whereby the company pays a monthly fee and signs over control to the ASP. Companies generally access the application over the Internet. So if you want an enterprise resource planning system but don't want to shell out the bucks, an ASP will host the system for you. And like a good party host, it takes care of all the details: implementation, trouble-shooting, maintenance and upgrades.

ASPs make sense in a lot of ways, which is why they've been garnering more than their share of media hype. And why not? Many a modern business and service runs on a similar premise. Most people who pump iron would rather pay $50 a month to the local gym than buy all those weights and lug them to the basement.

Because signing up for an ASP requires little or no technical expertise, the model means that businesspeople can shop for applications they previously could only get from their IS departments. That's good news for many on the business side: the pleasure of high-tech applications without the pain of understanding how they work. At the same time, it makes their already murky relationship with the IS department even murkier by introducing the issue of control and accountability into transactions that formerly remained staunchly in the IS domain.

But relationships aside, renting applications and accessing them over the Internet forces companies to turn notions of security and privacy on their heads: Signing up for an ASP means handing over crucial, and often very private, company data to outsiders. An ASP agreement requires a new degree of trust, and not everybody is willing to grant it.

I'm feeling insecure about my NETWORK. How do I know it's safe to go into the water?

Network security is quickly becoming one of the trickiest areas of managing a company's IT resources. It's always been a less-than-ideal situation to have outsiders gain access to private company data. But the advent of the Internet and the proliferation of e-commerce websites means that no company with an Internet presence is immune from potential security breaches.

The name pretty much says it all: Network security is the way your company keeps its important data in the right hands, letting the good people in and keeping the bad people out. But the people in charge of network security—sometimes it's the CIO, sometimes a security officer—have a two-headed beast to wrestle, because network security is somewhat of a paradox. On one hand, the more secure your network is, the

less susceptible it is to outside intrusion. At the same time, the tighter the security gets, the more difficult it is for users to access what they need. Face it, nobody wants to remember six passwords just to access e-mail and surf the Web.

These days, the keys to keeping networks secure come in a few different guises. Perhaps the most common is the firewall, which is a combination of hardware and software that monitors traffic between networks and the Internet. Think of it as a very good baby-sitter that will let little Johnny watch *The Little Mermaid* but send out an alert when he reaches for the *Rambo* tape.

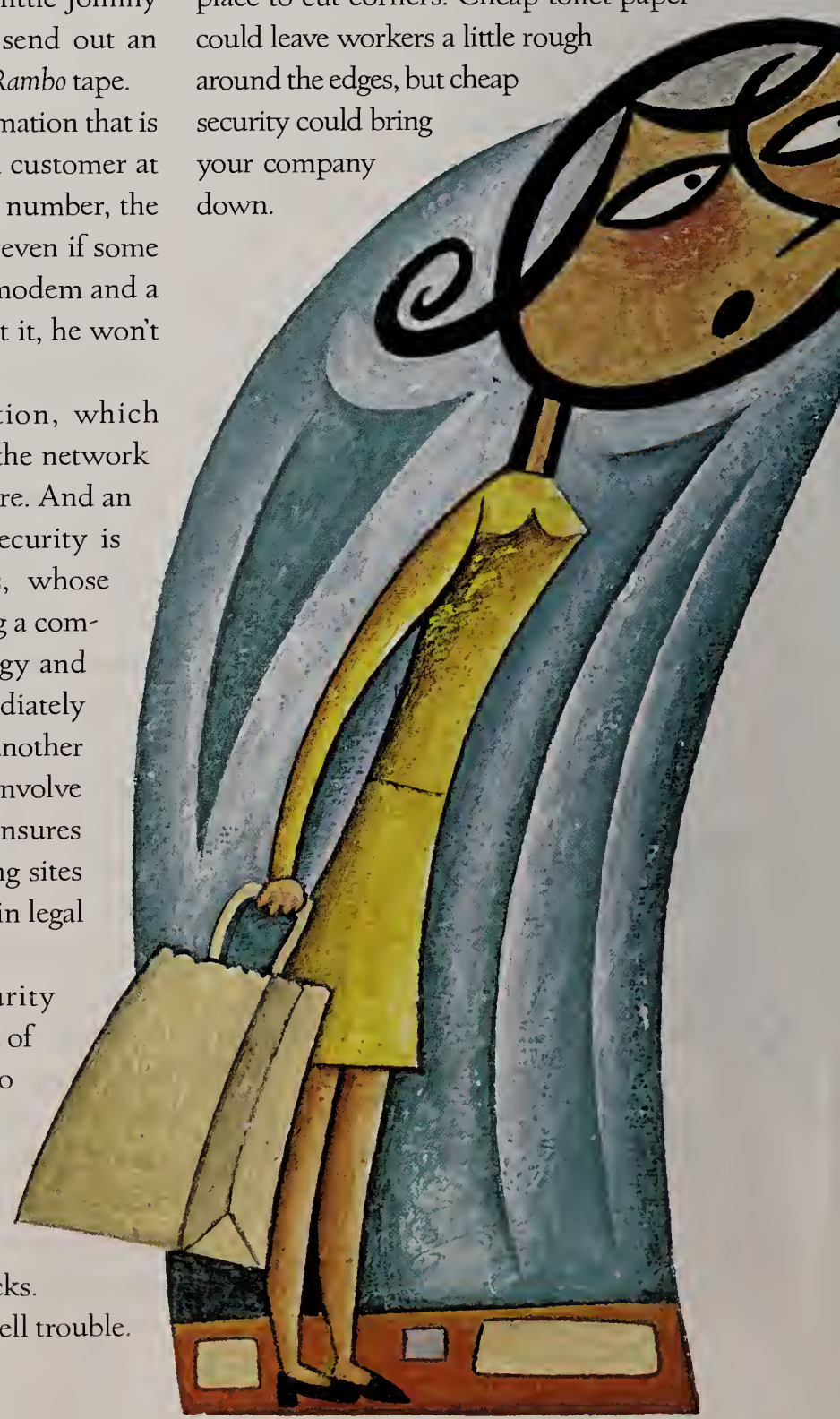
Encryption scrambles information that is sent electronically. So when a customer at Talbots.com types in her Visa number, the site's encryption ensures that even if some enterprising teenager with a modem and a spare afternoon does intercept it, he won't be able to read it.

There's also authentication, which checks that people accessing the network are really who they say they are. And an emerging area of network security is intrusion detection systems, whose goal is to thwart hackers using a combination of firewall technology and the ability to test and immediately repair security breaches. Still another part of network security can involve Internet monitoring, which ensures that employees aren't accessing sites that could land the company in legal hot water.

Some vendors offer security suites that bundle one or more of these solutions and claim to make your network completely secure. Be wary of these. The fact remains that no network is really 100 percent secure from outside attacks.

Internal threats can also spell trouble. Network security breaches can leak from the most unassuming places, like employees who leave their passwords scribbled on Post-its on their computers. And on a more threatening level, danger can come in the guise of disgruntled former employees who are willing to disseminate security information for money or revenge.

Security costs are part of doing business these days, like paying the building management fee so that the bathrooms remain stocked with toilet paper. But this isn't the place to cut corners. Cheap toilet paper could leave workers a little rough around the edges, but cheap security could bring your company down.



Operating Instructions

OPERATING SYSTEM An operating system runs all the programs on a computer by taking care of the input and output, and tracking files and directories.

UNIX A family of operating systems first developed in 1969 at AT&T's Bell Labs. It's difficult to learn, but portable, flexible and powerful enough that it has become the OS of choice for many enterprises.

LINUX A version of Unix that is distributed freely. It's reliable and secure but not as robust as other versions of Unix. Nevertheless, many companies are starting to trust it for mission-critical applications.

WINDOWS 2000 The most advanced version of Microsoft's Windows operating system, which is trying to overtake Unix as the operating system of choice. It has a graphical interface that makes it easier to use than Unix but may lag behind in terms of reliability and scalability.

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I keep hearing about these VERTICAL MARKETPLACES. What can I buy there, and should I bring my own shopping bag?

That depends on whom you listen to. If the predictions of many analysts are to be believed, businesses that don't join a vertical marketplace, and now, are going to be on the outside looking in, noses stuck to the glass. Vertical marketplaces—a.k.a. B2B exchanges—are online communities in specific industries that bring together buyers and sellers over the Web to meet, converse and exchange goods and services through outlets like online auctions and catalog sales.

Their appeal to buyers is strong; purchasers can compare prices from a variety of sellers quickly and easily, and step outside of their usual supply chains for good deals. Sellers can reach new accounts and offload excess inventories regardless of geographic constraint. And both parties benefit from the savings, eliminating costly paper processing, phone calls, faxes and trips that have been a part of selling since long before Willy Loman took his wares on the road.

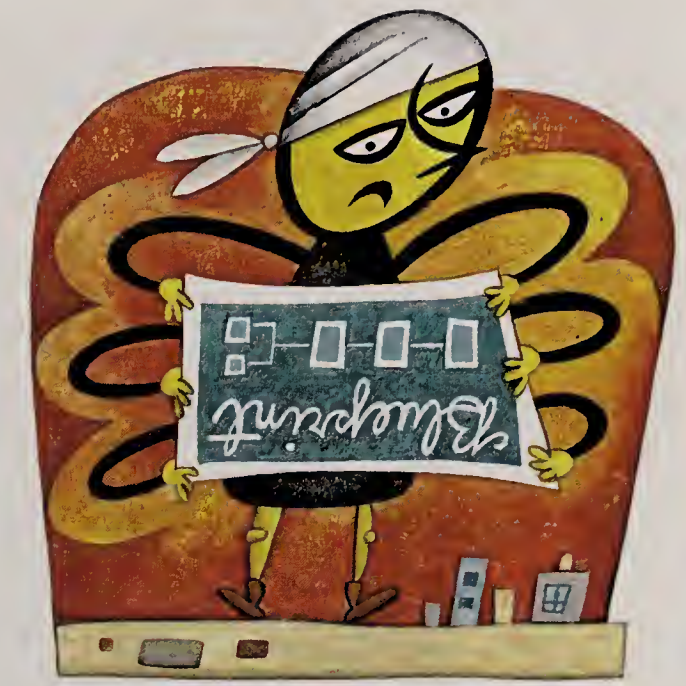
Many of the vertical marketplaces now operating online are third-party sites, which means that an outsider brings together buyers and sellers and profits from the union. VerticalNet, for example, made its name—and a lot of its pre-IPO employees rich—by opening up a site filled with vertical communities like manufacturing, food service and health care. Nearly every industry can find some sort of third-party marketplace on the Web. Need to get rid of 200 gallons of crude oil or 60,000 chickens in Tennessee? There may be someone in Timbuktu who wants to buy them.

The models for vertical marketplaces vary. In some, buyers pay for the transactions. More commonly, sellers pay. In others, everyone pays to be part of the community and to access the information. Experts are predicting that trillions of dollars will change hands in the next few years through B2B exchanges.

Recently, established players have decided that they'd rather build their own marketplaces than join one of the third-party sites that are glutting the Web. Sears decided to join with French retailer Carrefour to create a global exchange for the retail industry. And the Big Three automakers have announced plans to form a similar alliance—cutting out the middlemen who claim to cut out the middlemen.

Part of what's intriguing about the onslaught of vertical marketplaces is that they represent a change in the way many industries operate, shifting the balance of power from seller to buyer, forcing sellers to be competitive and opening up a no-holds-barred method of communication between the two. At the same time, they offer new opportunities for geographically disadvantaged buyers or sellers.

That's all the more reason to see what's going on in your industry. Suppliers on the sidelines are likely to get undersold by suppliers who can cut costs by doing business online. Buyers could miss out on key offerings. And experts predict that once the novelty of business-to-consumer sites has worn off—and according to Wall Street, it's wearing quickly—vertical marketplaces will remain standing. But not everyone agrees.



The models are still clunky, and despite the millions of venture capital being poured into these sites, they have yet to live up to their promise.

Are architecture and INFRASTRUCTURE the same thing?

Picture a brain-damaged spider trying to weave a delicate, silky masterpiece. Now visualize a CIO attempting to make sense of his company's computer architecture. Not a pretty sight. Computer architecture refers to the blueprint of a computer system, including the system's layout and how the processing workload and application logic are distributed. It defines standards ensuring that hardware and software from different vendors will work together and that data can be shared across different platforms. Most large companies have a number of incompatible systems that have been carefully integrated over the years.

Consumer Acronyms

MP3 An audio compression format that lets users download sound files, such as music, onto their computers in a short time without taking up all the room on the hard drive.

PCS (personal communications service) Combining three different technologies, this advanced network architecture provides wireless networking mobility. A PCS phone can connect to a PC for wireless networking.

PDA (personal digital assistant) A handheld device that functions in several capacities: as a cell phone, fax sender and personal organizer, among other things. PDAs use a stylus, or pen, rather than a keyboard.

By contrast, infrastructure consists of the physical components of the computing architecture—wiring, routers, switches, middleware, operating systems, servers and sometimes desktop PCs. Most of this stuff is invisible to you. However, when your computer freezes or your network goes down, it doesn't seem so invisible anymore. Next time that happens, at least you'll know to scream, "You gosh-darn infrastructure!" before you sneak out to play a quick nine holes.

I thought MAINFRAMES were dead. Who revived them? And why?

A mainframe is a large computer that handles business transactions. First introduced in the 1950s, mainframes became ubiquitous over the next four decades and can be found in the data centers of most large enterprises. While today's average PC contains exponentially more computational oomph than any of the early mainframes, the breed has kept pace, packing many millions of instructions per second into a shrinking package.

Mainframes play host to and process large amounts of data—they are workhorses, plowing the fields with nary a whinny, but are dismissed as unsexy by some technophiles because of their ancient bloodline. Mainframes are usually connected to thousands of dumb terminals. The essential attribute of a mainframe is that processing is undistributed—the stereotypical view is that of a huge server enclosed in a glass house guarded by an elite team of IS staff with a street-gang attitude that says, "Data is power, and this is our turf."

Sometime in the late 1980s, a technology called client/server computing threatened to displace the mainframe. In the client/server model, processing power is distributed flexibly across networks of interconnected workstations and servers, with client PCs taking on many functions formerly centralized on mainframes. This frees the mainframe to handle specialized tasks such as security and database management. At the same time, client/server end users gain something long denied them: real-time access to the "live" (meaning most current and relevant) enterprise information.

Many technologists believed that client/server would eventually render the mainframe useless, a doddering dinosaur of an early Technozoic Era. However, implementing client/server in large enterprises turned out to be fraught with difficulty, complexity and high cost. And mainframes came to be seen as possessing persistently valuable legacy data and applications. So instead of going away, they continue to play a useful role in a multitiered computing architecture (see "Are architecture and infrastructure the same thing?" Page 113). CIOs continue to buy these behemoths because they are reliable and secure. Client/server, the trendy infrastructure of

the 1990s, remains popular, especially in today's Web-connected environment, though technologists no longer believe it will solve Russia's debt crisis or improve Jim Nabors' record sales.

Why does my DATA need its own WAREHOUSE? And can I mine it with one of those hats with the lights in the front?

Having trouble visualizing a data warehouse? Think of 12 fraternity brothers stuffing themselves inside a Volkswagen Beetle. Each frat boy represents reams of company data. The Beetle is the warehouse. The dashboard represents the...oh, never mind.

One of the more hyped technology solutions in recent years, data warehouses have become de rigueur in many large companies. A warehouse is a database that holds large amounts of historical business data in one place. The wonderful thing about warehouses is that they collect data from across the enterprise and make it easily accessible for analysis. For example, a retailer might collect a customer's demographic information, purchases, returns and credit card usage. Data like this can help businesses improve customer service and explore new business opportunities.

Data mining uses automated tools to extract data from a warehouse to analyze patterns, trends and relationships. By mining, companies aim to refine large clots of data into useful information. A credit card company, for example, analyzed two years' worth of customer payment data and discovered that reducing minimum payment requirements for customers consistently near their credit limits increased their average balances, which generated more interest revenue for the company. Some banks use mining tools to determine how customers will react to interest rate adjustments.

Not all data warehouse projects succeed, however. Many an expensive project hits the skids because of a lack of partnership between business managers and IS, unclear business objectives and metrics, and a failure to comprehend the enormous investment needed in people and resources. And a bevy of data mining tools on the market means that companies must do their homework to make sure they're purchasing the right tools.

What else about IT is confusing you? Let Senior Writer Meg Mitchell (*mmitchell@darwinmag.com*) or Senior Editor Todd Datz (*tdatz@darwinmag.com*) know.

Operator Assistance

THE 411 ON TELECOMMUNICATIONS TALK

BANDWIDTH The amount of data a network can transport in a given period of time. Higher bandwidth means more data per second can be transferred.

BROADBAND A network that provides very high bandwidth.

CONVERGENCE Bringing together different technologies into one device. For example, accessing the Internet over a cell phone or making phone calls through a PC.

DSL (digital subscriber lines) Transmits data over copper wires at a much greater speed than regular phone wires. DSL works only when the user is close to one of the telephone company's central offices.

ETHERNET A LAN standard used in many organizations.

ISDN (integrated services digital network) International communications standard for transmitting voice, video and data over existing telephone lines. ISDN uses digital technology that allows data to be transmitted much faster than standard phone lines.

LAN (local area network) A communications network that connects users within a single location, such as in an office.

TCP/IP (transmission control protocol/Internet protocol) This is one of the core standards of the Net and makes it possible to communicate among all sorts of computers.

VOICE OVER IP Voice transmission over the Internet rather than phone lines. The quality is generally not as good as phone transmission, but it's much cheaper.

WAN (wide area network) A communications network that connects widely separate locations. Think of WANs as the interstate highways and LANs as the secondary roads connecting them.

Vacationland

Wants Your Business

If Angus King had his way, you wouldn't just vacation in Maine. You'd live there. (And bring your company with you.)

BY DAINTRY DUFFY

He's the unconventional Independent governor who confounded the pundits by emerging victorious in his first bid for public office. Whizzing around the state capital on his motorcycle, he presents an incongruous, and surprisingly approachable, image for a politician. In fact, folks around the state just refer to him by his first name. Although this description also fits a particularly illustrious veteran of the WWF, we're not talking Jesse here. We mean Angus King—the full-follicled, 71st governor of Maine—and the lesser known of the nation's two Independent governors.

Long touted as "Vacationland," Maine is known largely for its lobsters, ski resorts and craggy coastline. But, since taking office in 1994, King has been on a mission to attract businesses to the state, particularly technology companies and dotcoms that have traditionally steered their jobs and money to high-tech meccas like California and Massachusetts. Recently, King has turned up the heat in his technology crusade with innovative programs like the lunch-boxes-to-laptops proposal that would give every seventh-grader in the state a laptop—for keeps.

Recently, we spoke to the second-term governor about his views on technology leadership, the challenges of growing Maine's economy and his vision for the state's future.

PHOTOGRAPHY BY MARK WILSON

"The dilemma of public service in the year 2000 is that the public wants the

DARWIN **What made you realize that Maine needed to pursue technology more aggressively?**

ANGUS KING Before running for governor, I owned and managed a small company. I couldn't afford to hire a lot of people, so I bought a Mac. The company revolved around technology, because to compete, we had to be able to do more with less.

So basically I took that private-sector experience and multiplied it by several thousand to try to do the same thing for Maine. When I came into office, there was a shortfall of money, and we had to cut the state's workforce by a thousand people—about 10 percent. To meet the needs of the public, which continue to grow, we have to increase our productivity through investments in technology.

What IT investments have you made so far?

Well, when I came in, there was no e-mail in state government. We had 10,000 people, no e-mail connections and 24 different word processing programs, most of which were incompatible. In other words, we were in pretty bad shape. Now, virtually everyone in state government, even at the remote offices, has e-mail. I just met with some people from the Department of Transportation, and they talked about how they can now submit all of their project descriptions and pictures electronically to the environmental agencies. The environmental agency can look at the pictures and the map right on their desktop and make a decision instantly. Five or 10 years ago, there was a lot of paper that went back and forth. It took longer and required more manpower.

road fixed, but they don't want to pay the taxes."

Are you advocating technology because it's the right thing to do, or are citizens demanding it?

I was riding my motorcycle up in the northern part of Maine one day, and I stopped at a general store to get some gas. I walked in, and the lady behind the counter saw me, and the first words out of her mouth were, "Ha, the tax man!" in a kind of negative way. Then, when I finished paying for the gas, she said, "Where are you going from here?" I said, "I'm going south down the road here." She said, "Well, I hope you have a bumpy ride and maybe you'll fix the road." That sort of summarizes the dilemma of public service in the year 2000. The public wants the road fixed, but they don't want to pay the taxes. So we've tried to reengineer a lot of what we do in order to be able to provide a higher level of customer service at the same or lower cost.

And how is information technology helping you do that?

We're just beginning with the Internet filing of income taxes, and next year it will be completely up and running. To process one paper tax return costs $3.50. To process one Internet return costs 50 cents. I think that's probably as dramatic an example as you'll find. Plus, the Internet returns are 100 percent accurate. There is a tremendous savings down the road to that as well.

We're pursuing technology for the very same reason that business is doing it: We have high customer demand for services and low customer tolerance for higher prices. I issued a directive at the beginning of the year that I want it to be possible for citizens to have all of their interactions with state government on the Internet by July 2001.

How wired is Maine presently?

Parts of the state have MediaOne's Road Runner service, and Portland has the highest percentage of customers using that high-speed Internet connection of any place in the country. We have about 100,000 miles of fiber-optic cable, and we were the first state in the country to have a fully digitally switched phone network. We have a fabulous telecommunications infrastructure. It is truly one of the best in the country—probably the best—and remarkable for a small state.

Has that telecom infrastructure helped you attract high-tech jobs to Maine?

I don't think we do as well as we should because most people outside of Maine think of us as vacations and lobsters. But we're working hard to dispel that image. We've got a burgeoning software industry, we've got dotcoms, and we've got some very high-powered biotech stuff going on. We have two major semiconductor manufacturers, a good telecommunications infrastructure, a fabulous quality of life and great schools.

There are some people who just plain won't leave Silicon Valley, Manhattan or Route 128 [outside of Boston]. But for everybody else, Maine is a pretty desirable location. The key to the future for Maine is that you can now work where you live instead of having to live where you work.

Many analysts are predicting that the next few years will bring a lot of consolidation among the dotcoms. Do you worry that you only have a limited window in which to attract such companies to Maine?

The decisions about where companies locate are very idiosyncratic. They depend on where the boss wants to live. In doing this for almost six years, I've learned that there's no firm predictor of what will happen. I mean, who would have said 25 years ago that the world's largest software company would be in Redmond, Wash.? Or that the biggest mail-order computer center would be in Austin, Texas? It has something to do with Bill Gates and Michael Dell. So it's hard to predict those things.

What kinds of high-tech jobs are you focused on attracting?

Let's face it, we're in the infancy of the Internet commerce business. Nobody really knows how it's going to go. But one thing that seems to be emerging is the model of Internet plus people. You go on the Internet and look at the online catalog, but then you can connect to a real person. Five years from now everybody is going to have a little camera on their computer and you're going to be able to talk to somebody and see a real person, wherever they are. There are currently something like 15,000 people in the country engaged in customer service relating to Internet transactions, and in a year that number is going to be 70,000. It's huge growth.

The fastest-growing company in Maine started four years ago with four people and is now up to almost 2,000 people. Envision Net provides telephone technical support for online companies. It has a contract, for example, with Microsoft. If you're on the MSN network and you have a problem—the screen freezes or you can't download—you call a number and it rings in Brunswick, Maine. Obviously we don't want only those jobs. We want the headquarters jobs and the engineering jobs and the design jobs, and I think we're going to get our share of those.

Many technology companies that are looking for a presence in the New England area are naturally drawn to Boston or the Route 128 corridor. How do you sell Portland against Boston?
The availability of workforce, cost of living, housing and telecommunications infrastructure are all as good or better here than in Boston. Half the people in Boston spend all year wishing they could be in Maine for two weeks. There are 4.5 million people in the United States right now, while we're talking, who are thinking about their Maine vacation. Well, what about living here?

Look at Silicon Valley, where a two-hour commute is not unheard of and a fixer-upper is $500,000. You come to Maine and you have a 20-minute commute, you can be at the ocean in 15 minutes, and you can buy a pretty nice house for $200,000. That's got to have some appeal. Last year [the Children's Rights Council] in Washington, after studying all these criteria, said that Maine was the best state in the country in which to raise a child.

Those are attractive selling points, but how much water does the quality-of-life argument hold with companies?
As I talk to businesses, the biggest thing that they look for—they don't ask about taxes, they don't ask about permits—is qualified people. That's the most attractive thing a state can offer, and what we have in Maine are just really good people. We've probably added 15,000 to 20,000 telecommunications-based jobs in the last five years—call centers, customer service and that kind of thing. And it's mostly been because of the quality of the people.

The classic story is MBNA, the Delaware credit card company. Charlie Cawley, the president, had a summer place up on the coast near Camden, and he wanted to have a little piece of his bank based up there so that he could deal with it in the summer when he was up here. Their plan was to have 70 people; they now have 4,000. They've gone into the smaller communities, like Farmington, Fort Kent, Presque Isle, and opened 200- and 300-person facilities. You look at the map and these are little tiny towns in rural areas, and that's where they're finding these wonderful people who have a great work ethic, are very pleasant, good on the telephone and intelligent. That's what we can offer.

"I feel strongly that you can't lead in technology

How do you convince Mainers that the charm of the state and the quality of life that you evangelize about won't be disrupted by luring dotcoms and big business to the state?
That's a very good question. The challenge that we face is to increase the level of prosperity and opportunity without screwing up what we all love about Maine.

I've recently put a lot of emphasis on the issue of sprawl. How do we keep from losing the small-town quality, the open land and all of that? We're doing everything from buying development rights from farmers to keep the farms open, particularly near urban areas, to trying to put state office complexes downtown instead of in the suburbs. If part of our appeal is the quality of life, we don't want to ruin that very thing by not paying attention to the effects of economic growth. There is no way you can avoid it entirely. If you have more people and they make more money, they're going to start wanting things like malls and golf courses.

To say Maine will forever be charming, with small, rural towns and white churches, and won't change—I can't guarantee that. But I'm hoping that we will be able to maintain the quality of the environment. I met an old man in the campaign in 1998 who summed up what we're trying to do. He said, "What we want up here is a good place and the money to enjoy it."

For now, Maine *does* have a lot of small towns in some pretty rural locations. How are you using technology to improve educational opportunities in small-town schools?
This summer we'll be implementing the most advanced interactive school television system in the country. It's based upon what's called an ATM—asynchronous transfer mode—switch. It's a very fast fiber connecting every high school. The idea is for the kids at a school of 200 to be able to take an advanced chemistry, Japanese or Latin class in another high school. It's a way of sharing resources and enriching the curriculum of a small school without closing a school and busing all the kids somewhere else.

Your much-publicized proposal to give every seventh-grader in the state a laptop has been criticized by some as gimmicky. What do you say to those critics?
First, from purely an economic development point of view, it's good for Maine to be known as a place where hot things are happening in technology.

The president of the United States, one day after I announced this initiative, happened to be making a speech in Silicon Valley to 500 executives. And in the middle of the speech he stopped and said,

"Have you heard about this amazing thing they're proposing in Maine, where every seventh-grader is going to have their own laptop?" I guarantee, that's the first time in the history of Silicon Valley that the terms *Maine, amazing* and *technology* have been used in the same sentence. Businesses will pay attention to that, that's what they want. My job as a leader is to try to look out into the future, see what's necessary and then equip my people with whatever it is.

No. 2, it's a tremendously powerful learning technology, on par with the chalkboard and the pencil. The idea of being able to teach the history of Rome and go to a website to watch an archeologist excavating the catacombs in real-time—that is much more powerful than reading a book. It's a book plus! I want computers to be second nature, an integral part of learning for our people.

No. 3 is the haves and the have-nots. It's a big issue nationwide and in Maine. We've got a lot of small towns, a lot of people whose parents didn't go to college and a relatively low number—about 20 percent—of our people have college degrees. This proposal is for every school, every kid, rich, poor, north, south, east, west, rural and urban. At a stroke, it would begin the elimination of the division between the technological haves and the have-nots.

How do you counter arguments that the state should be investing in books, teachers and facilities—education's more traditional needs?

Well, it's not an either-or situation. I think we ought to do both.

Some people make fun of my laptop proposal, saying that the kids would need umbrellas to keep their laptops dry because the roof is leaking. That's a little exaggerated. I believe that access and skills in technology [are important], and to say that we have to wait until we've fixed every leaky roof in the state really misses the point.

So much of what government does is incremental, little stuff. A business school guy once told me, "You never get ahead by keeping up with your competition." The only way to jump ahead is to do something bold and dramatic. I saw this as a way we could do something first and give our kids something that a larger state might not be able to manage. It was a chance to really take a leap, and that's the whole idea.

I don't have the slightest doubt that what I'm proposing is going to happen all over the country. The only real question is whether Maine is going to be first or 35th.

unless you literally know how to do it yourself."

Senior Writer Daintry Duffy went to college in Maine. And she doesn't even like lobster. She can be reached at *dduffy@darwinmag.com*.

ROY'S
MOTEL
CAFE

AD NAUSEAM

WHEN TECHNOLOGY VENDORS ADVERTISE ON THE BOOB TUBE, CLARITY IS SOMETIMES A CASUALTY. OUR TWO REVIEWERS CUT THROUGH THE HOOEY.

Last year the 25 technology companies with the biggest TV ad budgets spent a total of $1.2 billion on TV spots, according to *Marketing Computers*—a whopping 80 percent increase over the $650 million doled out by the top 25 in 1998. How successful are these ads at portraying complex technologies in a way that the average sitcom watcher can understand? We asked John Carroll, an ad man turned media critic and managing editor of WGBH-TV's *Greater Boston*, to turn his acid wit on the marketing messages behind ads from Hewlett-Packard, IBM, Microsoft, Qwest and SAP. Contributing editor Chris Lindquist, a liberal arts major turned technophile, examined the ads from a technologist's point of view. They found that some of these ads taste great, others are less filling—and they don't always agree on which ones are which. *–The Editors*

BY JOHN CARROLL AND CHRIS LINDQUIST

ILLUSTRATION BY PETER HORVATH

RADICAL TINKERS

Hewlett-Packard
"Original Radicals"
Created by Goodby, Silverstein & Partners

John Carroll Hey, kids! Let's start a computer company! We can use my Dad's garage.

Hewlett-Packard's back-to-the-roots campaign is standard-issue marketing for companies that have lost their way or their market share. In this case, Hewlett-Packard hearkens back to the two-man garage band that founded the company, complete with black-and-white footage of them assembling their first computer. The spot features a female narrator who happens to be Carly Fiorina, Hewlett-Packard's president and CEO—a fact that will go unnoticed by millions since she's never identified. Regardless, as we see the original garage, the Unknown CEO says:

"This is the workshop of radicals.... Their idea was simple: Invent something useful or significant, or it doesn't leave the garage. The idea was so simple, it was radical."

OK, that's two simples and two radicals in the span of 15 seconds—a pretty reliable sign that you may have a koncept with a capital K on your hands. So what are they saying—that Hewlett-Packard is just a startup on steroids? Exactly.

"Today the company of Bill Hewlett and Dave Packard is being reinvented," the Unknown CEO says. "The original startup will act like one again. Watch."

All right, but do I have to listen? This ad tries too hard, plays the same old tune and almost never hits the right notes. Just like your average garage band.

Chris Lindquist Calling Bill Hewlett and Dave Packard radicals in the era of Dennis Rodman and the Unabomber may seem like an overstatement. But the pair did, as HP CEO Carly Fiorina says, create an industry. Way back in 1938 they built a tool to test sound equipment: It was the first block in what would become a technology empire that covered everything from medical gear to computers to the calculators every engineer worth his slide rule had to own.

But HP's ventures haven't been quite so cutting edge recently. The company's mainstay markets—scanners, printers, personal computers and servers—have weakened under an assault by countless competitors. And when the company tried to respond, it gave the appearance that the car in the garage was more a DeSoto than a Ferrari.

Enter Fiorina, who engineered an ongoing, massive reorganization that has split the company into smaller pieces (including spinning off Agilent Technologies, which now manufactures the test and measurement equipment HP grew up on) as well as encouraging new ventures in e-commerce. And the effort seems to be working: HP's most recent financial results showed significant improvement over the previous year, and the company even seems to be making headway against tough competitors like Sun Microsystems and IBM.

The garage imagery is trite, for sure, but there actually does seem to be something radical going on at HP these days.

VIDEO IMAGES COURTESY OF GOODBY, SILVERSTEIN & PARTNERS

MERCHANT OF VENICE

IBM
"Park Bench"
Created by Ogilvy & Mather

JC The Ugly Ameritrader sits on a bench in St. Mark's Place surrounded by pigeons and golden images of the canaled city. Since he's one of those unconstructed-suit, 24/7 guys who's too important not to be working, even in Venice, he's tracking commodity prices on the eyepiece of some fancy-schmancy headset gizmo and issuing voice commands.

"Ah, gimme soybeans...yeah, yeah, yeah, yeah, yeah, yeah...uh, scroll up...buy it...*buy*...next page...close that, close that...all right, beautiful...sell, *sell,* SELL IT."

Every transaction sets the pigeons flapping and scattering, while Max Headset continues his drive-by trading. An announcer says, "The voice-activated wearable computer. It may be far out, but it's not far off." The kicker comes when the St. Mark's market maker gets a phone call and says, "Hi, Donna. Oh yeah, the meeting was fine. I'll be on the afternoon flight."

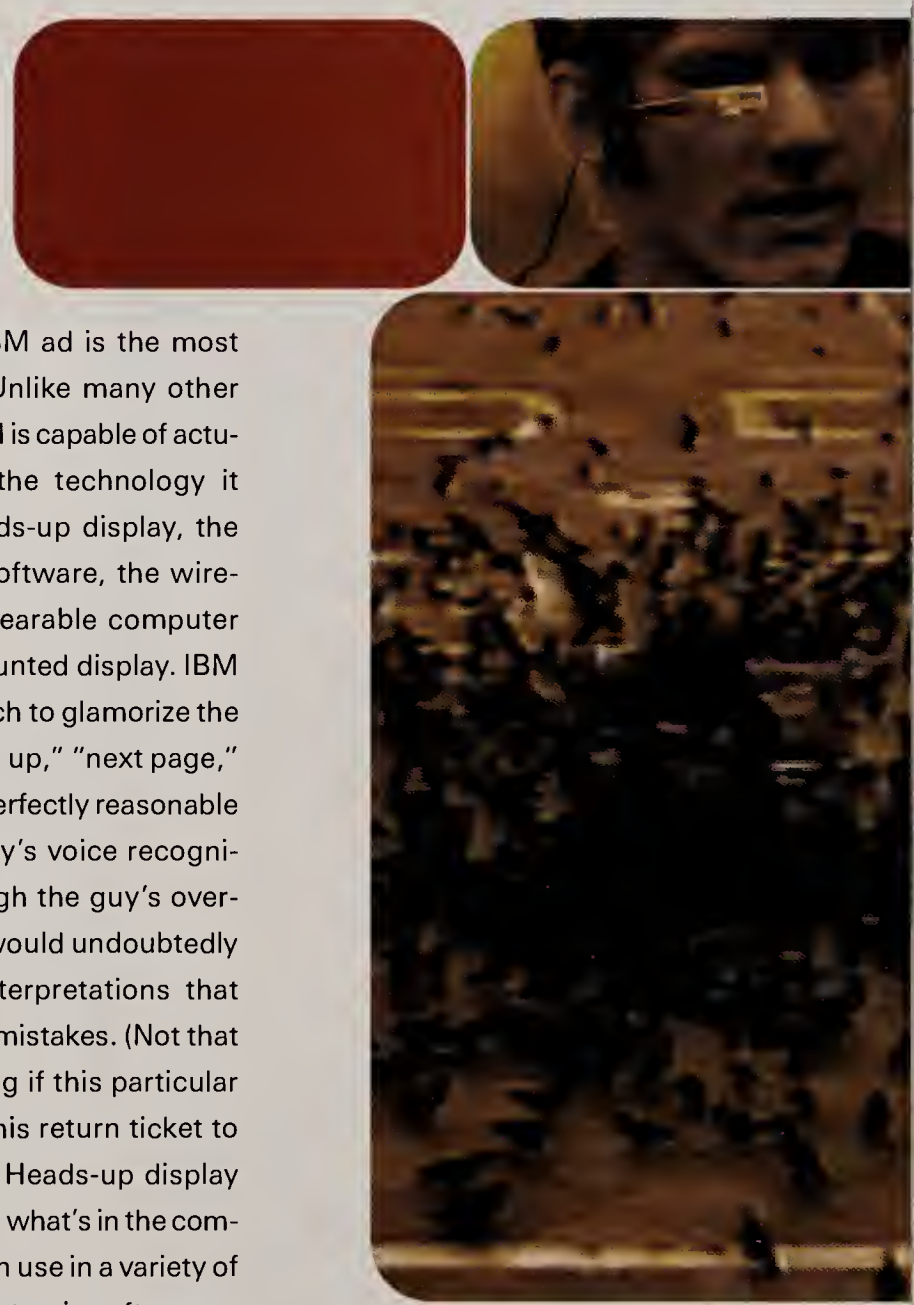
Like he put one over on her by being in St. Mark's Place instead of some stuffy boardroom. Like it made any difference beyond giving the pigeons agita.

Pretty good product demonstration, though, with plenty of shots of the eyeball-level miniscreen in action.

But what a waste of Venice.

VIDEO IMAGES COURTESY OF OGILVY & MATHER

CL First things first: The only reason this guy's scaring off nothing but pigeons is because all the people who had been at St. Mark's before he arrived quickly got headaches and decided to take nice, quiet gondola rides.



That said, this IBM ad is the most honest of the lot. Unlike many other tech advertisers, IBM is capable of actually producing all the technology it shows off: the heads-up display, the voice recognition software, the wireless modem, the wearable computer and the glasses-mounted display. IBM doesn't even do much to glamorize the various toys. "Scroll up," "next page," and "buy it" are all perfectly reasonable commands for today's voice recognition software, though the guy's overexcited screaming would undoubtedly cause a few misinterpretations that could lead to costly mistakes. (Not that you'd hear me crying if this particular trader had to hock his return ticket to cover his margins.) Heads-up display technology similar to what's in the commercial is currently in use in a variety of fields, from surgery to aircraft manufacture. Wireless Net access—while probably not speedy and reliable enough to satisfy the needs of a Starbucks-fueled commodities trader—is available, and more widely so in Europe than in the United States.

As a result, the announcer's comment, "It may be far out, but it's not far off," rings quite true. How refreshing. Though if the jerk in this ad is any indication of the results, it's not something to eagerly anticipate.

MR. GATES' NEIGHBORHOOD

Microsoft
"The Best Is Yet to Come"
Created by McCann Erickson/A&L

JC Despite ponying up billions in philanthropy, Bill Gates can't shake his image as the Geek Who Stole Christmas. So here he is, wearing a nice sweater and a nice smile, to explain what's really good for us, never mind that pesky antitrust quibbling. Let's listen in.

"Twenty-five years ago, my friends and I started with nothing but an idea—that we could harness the power of the PC to improve people's lives." Of course, they actually started out with someone *else's* idea. But let's not get technical about it.

"Since then," Gates continues, "it's become a tool that has transformed our economy and had a profound effect of how we live and how our children learn."

Ah, the velvet blackjack: Let Microsoft be Microsoft...for the kids. Really, now, there may be good reasons not to bust up Microsoft like a piñata, but Do It For The Kids probably ranks just below Hey, Mrs. Gates Really Needs This Much House.

Anyway. "Now our goal at Microsoft is to create the next generation of software," Gates says, "to keep innovating and improving what we can do for you." Wow, a software company that's committed to innovation. What will they think of next?

Did Bill Gates' lawyers write this ad? Apparently they think we've all gone Microsoft in the head.

CL As John notes, this ad isn't directly about technology; it's about trying to polish a tarnished corporate image and squeeze a salty tear for a bunch of billionaires. But the ad does make some technology claims, albeit in sidelong manner.

If nothing else, these warm-and-fuzzy—well, fuzzy at any rate—pleas prove that Microsoft still thinks that the word *innovate* is the magic bullet that can slay nasty creatures like federal judges and attorneys general. Granted, the Microsoft definition of the word often makes it appropriate in the following sentence: "After we innovated him, we buried the body under the Space Needle." But no matter where you stand on the Microsoft monopoly debate, it can be hard to argue that Microsoft is a great innovator—at least in technical terms.

The common Microsoft approach: Investigate other people's ideas, repackage them, add a bit of technology—usually intended to make the products work best in an all-Microsoft environment (otherwise known as "embrace and extend")—and launch them with the power of the company's considerable marketing muscle. Microsoft didn't invent the graphical user interface, it was just the first to succeed on the PC platform. It didn't invent the Web browser, it just created an acceptable if uninspired alternative and started giving it away for free.

Has the technique been successful? Certainly. But is it truly innovative? Judge Jackson doesn't seem to think so.

GLOOM SERVICE

Qwest Communications International
"Roy's Motel"
Created by J. Walter Thompson

JC Welcome to Davidlynch.com. The Qwest spot starts out with what looks like software code dissolving into a '50s-style sign for Roy's Motel & Cafe. Cut to the reception desk, where a grizzled older guy drops his suitcase like a man who's been on the road too long.

"What kind of rooms you got?" he says to a bored twentysomething gal who never looks up from the book she's reading.

"King size."

"You got room service?"

"Doughnuts and coffee."

"Got entertainment?"

"All rooms have every movie ever made, in every language, any time—day or night."

Clearly Roy's is the place to stay if you want to see *The Wedding Singer* in the original German. So what's that got to do with the price of continental breakfast?

Enter the helpful announcer: "Could your business use the bandwidth to change everything? [Here we see a two-lane highway with an "e" road sign.] Ride the light. Qwest."

So let me get this straight: If I own a motel and I'm offering only HBO, Qwest is the company to call? Is that it? I think direct mail might've been better than TV to deliver that message.

CL The Qwest TV spots epitomize one of the big problems with technology ads: They often overstate reality more than a tad.

The issue is one of scope. Qwest provides pipes. Great big pipes. Fill-your-drives-with-data-in-seconds kinds of pipes. These pipes (fiber-optic cables, actually, hence the "ride the light" tag) are capable of carrying huge amounts of data long distances in less time than it takes to hit the mute button. If your company requires Internet access, Qwest does that. If you want phone service, Qwest does that. Need to set up teleconferencing? Qwest does that. Qwest even did deliver a digital movie recently—with the help of Cisco and Twentieth Century Fox it showed off the animated film *Titan A.E.* in Atlanta last June. But one movie, one time is hardly "every movie ever made, in every language, any time—day or night."

Sure, at some point in the future—the far future—a pay-per-view video company could possibly create such a collection (though the licensing hassles would likely be mind-boggling). They might even choose to use Qwest's connections and servers to route it around the hinterlands. But for now, the ad is pure, dark fantasy.

Of course, if it does come true, we should hope that the world becomes a cheerier place than what Qwest's dingy ads all seem to imply. But even if everyone in that future world does look like a reject from *Blade Runner* auditions, at least you'll be able to watch *Batman Forever* whenever you want.

VIDEO IMAGES COURTESY OF J. WALTER THOMPSON

SEAT DECEIT

SAP
"Sara Berg"
Created by Ogilvy & Mather

JC Here's a product demonstration that really clicks. The scene is a crowded airline terminal, where a group of travelers is treated to this announcement: "Ladies and gentlemen, I'm sorry, Flight 126 has been canceled. There is another flight: Union Atlantic Air Flight 176 out of Gate 54. It has five remaining seats."

You can hear the air go out of the crowd. All of a sudden the would-be passengers—old couple, kid, group of nuns, guy with glasses—start giving each other the bad eye, knowing they're in a zero-sum race for the five remaining seats. Meanwhile, sitting quietly off to the side is a businesswoman with a laptop and MySAP.com. Three clicks later—travel, reservations, booking—she has a seat on the alternate flight. A foxy smile comes over her face, and over the PA system comes, "Correction, four remaining seats."

That's when the fun begins. People start scampering off, the guy with the glasses says "Hey!" and you just know it's going to get ugly at Gate 54. Meanwhile, the businesswoman just sits there with that smile.

Unlike in the Qwest ad, the message here is clear: If you don't have MySAP, you sap.

CL The problem: You need to advertise a complex product capable of performing myriad business tasks. As if that wasn't bad enough, you need to do it in a way that won't bore the average couch spud to death. Even worse, you have to say it all in 30 seconds. Solution: oversimplify.

I have to wonder how many people who saw this ad assumed—with reason—that MySAP.com is a new online travel service. That's certainly the implication of this little tableau. But boy were those folks surprised when they fired up their browsers and tried to book that next trip to Maui.

MySAP.com, you see, is really a business-oriented set of Web tools that companies can use to consolidate all sorts of things, from tracking expenses to buying paper clips. Yes, if your company wants to set it up to handle corporate travel, you can do that. Heck, if you want to use it to monitor the launch of your next Mars probe, you can probably do that too. But it won't necessarily be easy or cheap.

Is it kind of funny to watch some chubby businessmen and a flock of nuns fret about snagging one of those last available seats? Sure it is. But does the ad really tell you much about the technology it supposedly touts? Nah.

VIDEO IMAGES COURTESY OF OGILVY & MATHER

Seen any tech ads lately that you'd like to roast or toast? Tell Senior Editor Sari Kalin what you think about technology marketing at *skalin@darwinmag.com*.

WINDOWS 2000 MAGIC.

IBM

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intel inside pentium®!!!

the wiring of main street

By Daintry Duffy

6 a.m. On the outskirts of Buffalo Grove, Ill., the sun rises slowly over the tree line, casting a warm glow on freshly tilled fields and a faded red farmhouse. A well-worn pickup idles next to a porch, awaiting the dusty tread of heavy boots and the leisurely 10-minute drive into town.

At the local coffee shop on the corner of Lake Cook Road and Old McHenry, opinions on how Buffalo Grove's Little League champions will do against Deerfield this year are traded as heatedly as views on the upcoming presidential race. All the important news of the day is hashed out over crinkled newspapers, steaming coffee and that hearty mid-American breakfast staple: biscotti.

You see, Buffalo Grove is no longer the sleepy Midwestern farm community that used to provide Chicago with its cheese, milk and butter. Although it's still officially referred to as a village, Buffalo Grove has a Starbucks, a 14-screen IMAX theater and upwards of 43,000 residents, many of whom work in the Windy City 35 miles away. The farms and the flat, open fields still exist, but increasingly they're being swallowed by upscale housing developments, where three- or four-car garages and satellite dishes are the rule rather than the exception.

Whether you're managing a Fortune 500 company or Buffalo Grove, Ill., the rules for applying technology wisely are the same.

Keeping pace with a burgeoning professional populace that expects its local government to advance with the times has presented a challenge for village leaders. Over the years the fire, police, public works and finance departments each invested in computers and software to meet specific needs, like handling payroll and billing and keeping track of fire inspections. But maintaining separate systems in each department hampered information sharing. For example, without direct access to the public works department's systems, firefighters wouldn't know that a burning building contained hazardous materials. The technology environment had become so disjointed that the only way Fire Chief Thomas Allenspach or Police Commander Steve Balinski could tap into information collected by Building Commissioner Edward Schar or Finance Director William Brimm was by sneakernet—walking over to their offices and asking their assistants, Mary, Joanne or Bobby, to print out a hard copy.

By 1994 the village Board of Trustees realized that the lack of networked systems and the proliferation of functional silos—a problem that executives in the private sector can certainly relate to—was making it impossible for the town government to evolve with the residents' needs. The individual islands of information showed that the town was dipping its toes into the technology waters, "but they wanted us fully

PHOTOGRAPHY BY JEANNE HILARY

in the pool," says William Balling, Buffalo Grove's village manager.

Determined to address the information silo problem but unsure how to proceed, in 1994 the village board set aside $750,000 for a new technology infrastructure. And the following year the board members hired Robert Giddens away from his position as a consultant with BSSi Innovations, a data integration service based in Buffalo Grove, to spend it for them. In the past five years as Buffalo Grove's CIO, he has worked with Balling to bring the village from laggard to leader with the use of cutting-edge technology and a private-sector approach to public-sector business.

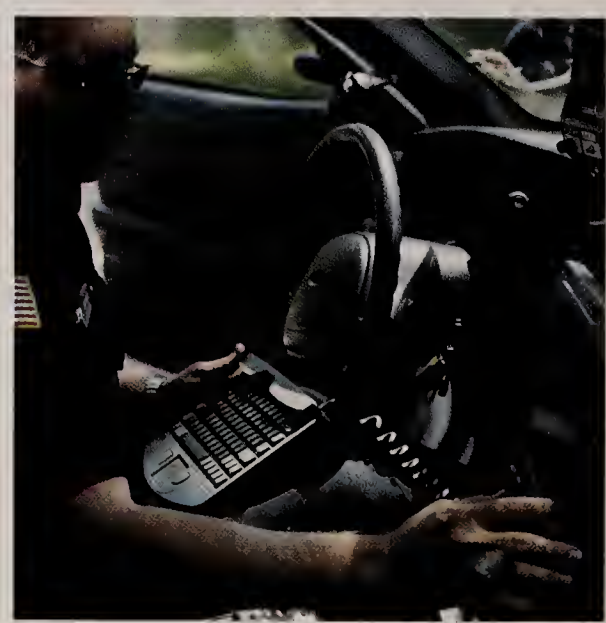
Police Commander Steve Balinski can have his officers spend more time on the streets, thanks to wireless technology that lets them file reports directly from their cruisers.

8 a.m.

8 a.m. A commuter, momentarily distracted by a cell phone conversation and the glare of the bright early-morning sun, runs through a stop sign at St. Mary and Raupp Boulevard. To avoid the truck lumbering through the intersection, she swerves into a hapless oak at the edge of the road, severely mangling both the hood of her Ford Contour and the unfortunate tree.

Officer Michael Sheen arrives. After using the cruiser's notebook computer to check the plates and the driver's record and search for outstanding warrants, Officer Sheen cites the driver for failing to stop at the posted sign and fills out the incident report electronically. The wireless technology allows the officer to transmit the report to the precinct from his cruiser and continue on patrol.

A $75,000 grant from the state of Illinois covered the cost of installing Motorola laptops in the police cruisers. The laptops contain two radio modems; one provides access to computer-aided dispatch data, and Illinois Criminal Justice Authority and FBI information, and the other connects officers to village data stored in Buffalo Grove's Lotus Notes system (software that lets groups share information from multiple locations). Through Notes, the officers can tap into any of the 450 databases containing such things as contact information for building occupants, previous incidents at certain addresses, unpaid tickets and even the number of times a home's garage door has been left open in the past month. The wireless system allows officers to perform routine tasks like filing reports from their vehicles so that they can maximize their street time (which is where the crime is) and minimize their station house time (where the only crime is the coffee).



Commander Balinski, a police veteran of 24 years, refers to Buffalo Grove's initial investment in technology as the "creation of the big cash cow" but acknowledges its effect on the quality of the community's police work. "It helped us get to a more professional level," he says. The wireless project is also slated to save Buffalo Grove $40,000 to $50,000 per year because the village no longer has to pay the telephone company for a network connection to transfer data to and from each building.

Officers can use the information gleaned from Notes to solve crimes as well as write

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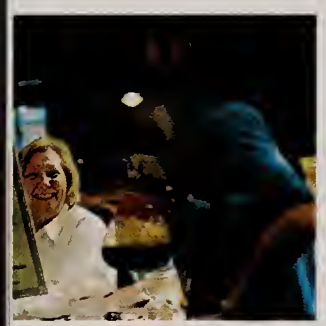

tickets. A mug shot application allows officers to assemble a virtual suspect lineup by searching for physical characteristics, age and sex. That information can now be retrieved 24/7, rather than only within the 9-to-5 schedule of the records office. The police department also uses Notes to track gang activity (such as it is, and it ain't much), route bulletins and paperwork through the department and assign investigators to cases.

10 a.m.

10 a.m. By now, most Buffalo Grove residents are at their desks, checking their e-mail and the Internet for news and information. Civic-minded Buffalo Grovians subscribe to the Village News List (in its first two months, the subscriber list went from zero to 300) to receive e-mail updates on local events and agendas for village board meetings. If you've been noticing an odd taste in your water, you'll know to attend this week's meeting, where the third item on the agenda will be water quality.

The village of Buffalo Grove is basically a $40 million service corporation, says Balling, who was appointed by the village president and board. As such, one of the board's primary concerns has to be keeping in touch with the needs of its stakeholders—the village residents. "Personally and professionally, our citizens are working in a fairly sophisticated environment, and that places demands and expectations on us," says Balling. With a highly educated, affluent and mobile population, the village is expected to provide top-notch service to its residential customers. The village's IT project is a prime example of Balling's goal to deliver to residents relevant services that are not overpriced. "Value is everything," he explains.

Technology has enabled the village to roll out a variety of new ways to communicate with its citizens, like the Village News List and the police department's webpage, which features daily bulletins on DUI arrests and neighborhood criminal activity and gets about 300 hits per day. Another website lets citizens download documents such as building permits, zoning ordinances and dog license applications. Although the village offers electronic forms and information as a convenience to citizens, Buffalo Grove doesn't want automation to com-

BUFFALO GROVE BY THE NUMBERS

Population: 43,250 (1999)

Land area: 8.99 square miles

Median home value (single family detached): $230,000 (1998)

Median income: $73,000 (1998)

Police: 76 sworn personnel, 17 marked patrol cars

Fire protection: Three stations, 61 sworn personnel, 18 vehicles

Schools: Three high schools, four elementary school districts, two community colleges

Bobby Freed, administrative assistant to Buffalo Grove's finance director and grandmother of three, serves on the village IT committee.

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uncover opportunities
or make better decisions.

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pletely supplant human contact. Someone who wants to apply for a building permit can download the application and fill it out at home but still has to go to the Village Hall to pay the fee and sit down with a plan reviewer.

Although residents can already e-mail the Town Hall, Balling eventually wants to have a polling or direct feedback mechanism that would let residents voice their opinions on proposals via e-mail or through the website. "However, you have to be careful that you're not ignoring pockets of the population when you do this," he cautions. Giddens estimates that more than 50 percent of the village's citizens have home computers, and many more have access at work. How best to enable two-way discourse with the rest of the population remains an open question. In the meantime, Buffalo Grove is expanding the reach of its outbound communications through cable TV, which has 75 percent penetration among village residents. Channel 6 on the local cable network is a scrolling information tree that Giddens and his staff can update with information that has to get out to residents quickly, such as a report on a lost child or a water main break.

Noon An MIS analyst runs a report for public works on this morning's car accident. In Officer Sheen's report, the driver blamed the fender bender on a stop sign that was hard to see (and not the engrossing cell phone conversation). The same report also details the damage to the tree, and a public works crew is dispatched to the scene to administer first aid to the ailing oak.

This sort of seamless knowledge sharing across the different village departments is made possible by Notes. Through Notes, all 250 full-time Buffalo Grove employees can reach whichever village databases they need to perform their jobs, whether it's a fireman who needs to get into the fire hose replacement database or an office adminis-

EXECUTIVE STRATEGIES

William Balling, Buffalo Grove's village manager, offers the following advice for overseeing an IT initiative:

1. Centralize project management. Don't segment accountability for the project by department. It's important to have a central project office to oversee all the work.

2. Don't underestimate the final price tag. Build a cushion in your IT project budget to accommodate unforeseen expenses.

3. Plan ahead. Set aside adequate financial reserves to keep hardware and software up-to-date.

Buffalo Grove's Board of Trustees funded a network to link the village's functional silos of information. Although the town had been dipping its toes into technology waters, "they wanted us fully in the pool," says Village Manager William Balling.

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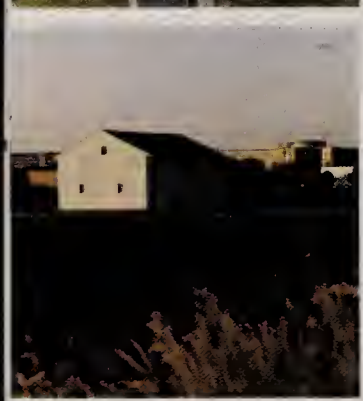
Darwin-07/10

trator searching the historical archive of purchase orders. Everyone can access the standard central name and address book, which serves as the foundation for all the community's information.

So critical is the need for efficient information sharing that village employees now spend about 80 percent of their computing time in Notes, according to Giddens. In cases like this morning's accident, the public works department can look up the number of incidents at the intersection of St. Mary and Raupp to determine if that stop sign really is so darn hard to see. Then workers can move it. [The Notes databases also allow the village to easily access information that few communities have the manpower to track.] For example, Buffalo Grove's public works department keeps a database on every tree planted on public property. If an infestation of Asian longhorned beetles threatens Buffalo Grove's maple trees, the public works department can locate all the maples in the village and take precautionary measures.



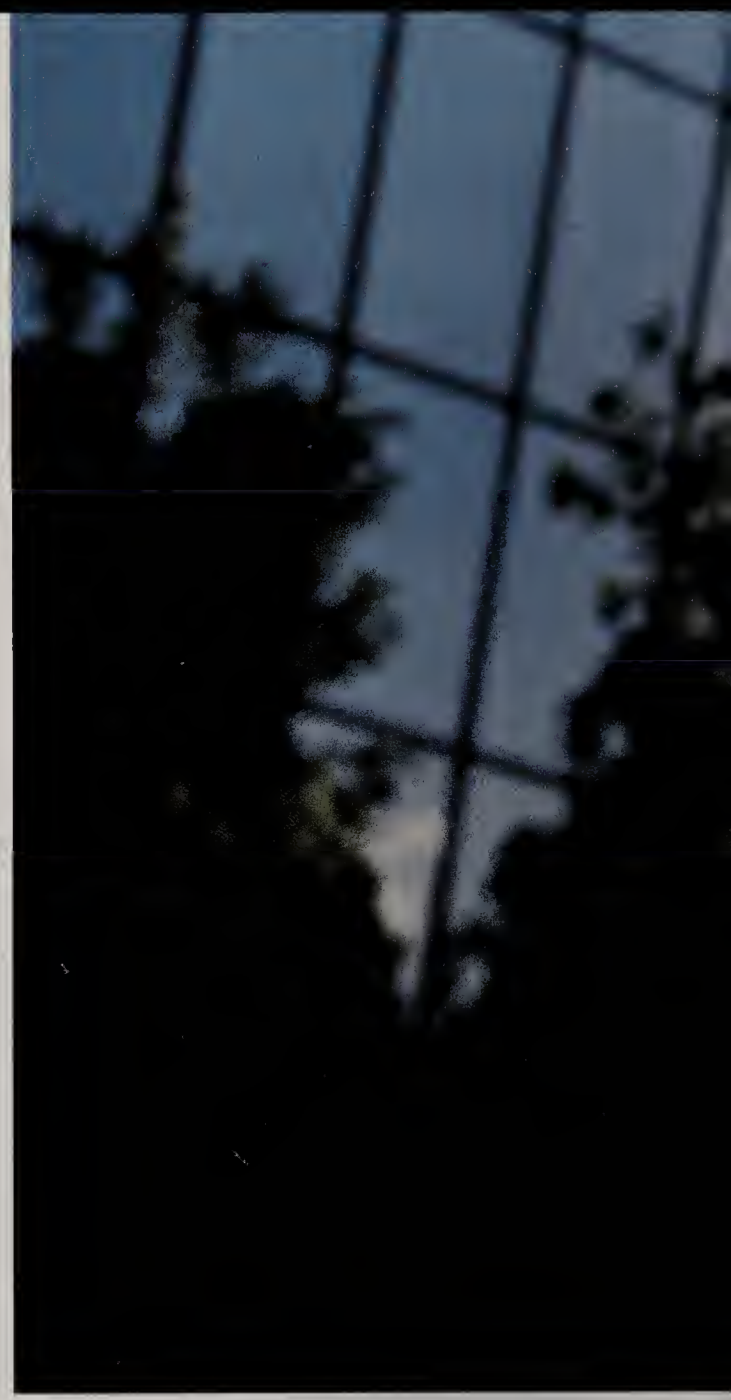
2 p.m.

2 p.m. A blue Honda has been parked on Weiland Road near Nancy's Pizza since 11 a.m. When Sgt. Steve Haisley logs the ticket on his laptop, Lotus Notes automatically tallies all the unpaid tickets for this license plate. Lynn Bethge, the supervisor in charge of police department records, notes that the driver has accumulated more than 10 unpaid tickets and places a hold on that driver's license. Next week, the car's owner will receive a notice in the mail advising him to pay up immediately. And the next time this vehicular miscreant is stopped by the police, he'll be asked to accompany the officer down to the police station, where he can either pay up or call mom for a ride home. Crime doesn't pay. Not in Buffalo Grove.

Collections is a serious issue for a local government. In the past, all billing was done by hand, and the only way to track who had not paid their bills and fines was to search through the paperwork. With its new database, Buffalo Grove has created the ultimate collection device. Among other things, the system tracks building permit and licensing fees online so that within moments a village clerk can pull up all of a resident's unpaid bills. Much of the village's utility bill printing and envelope opening has been outsourced to Third Millennium Associates, a Chicago-based business transaction company. Because Notes is now updated regularly with a disk containing bill payment status by person, the village can enforce its rule that a resident can't sell his or her property until all outstanding bills have been settled.

4 p.m.

4 p.m. The shadows are lengthening, and down at Village Hall, the village IT committee is commencing its bimonthly meeting. Sitting around the table are a smorgasbord of Buffalo Grove characters, among them Joe Bridges, the pro at the Buffalo Grove Golf Club; Tim Sashko, a deputy chief and 21-year veteran of the fire department; and Bobby Freed, an administrative assistant to the finance director



and a grandmother of three. There's a lot to discuss.

Back in 1995 CIO Giddens knew that the technology transformation he was about to begin would be a tough sell for many longtime employees because it would irrevocably change the way they thought about their jobs and the tenor of their long-standing relationships. The police department, for example, had historically resisted attempts to pool its information with other departments because of its concern about making sensitive information more widely available. So representatives from the fire, police and public works departments were asked to join the IT committee in order to find out firsthand what Giddens was planning and then act as evangelists and educators for their departments. In fact, in order to involve as many people as possible, Finance Director Brimm doesn't attend the committee meetings and instead sends Freed.

"People get really pumped up when you get them involved," explains Brimm. "You can bring in a police officer, a clerk or a firefighter who thinks that nobody cares about

Every time Buffalo Grove CIO Robert Giddens buys a new piece of technology, he's got to set up a reserve account to fund its eventual replacement.

their opinion and make them part of the process rather than part of the problem." Of course, Balling and the town board have demanded a significant return on their technology investment, and Giddens has come through by making smart use of the money they budget for him. For example, he saved Buffalo Grove more than $190,000 to date on its Internet connection by having AT&T Cable Services wire the village and park district to the school's connection.

Early on, the board decided that if it was going to invest in technology, it would need to have the means to support it long-term. As soon as IT buys a new piece of hardware or software, it is required to set up a reserve account and start putting money aside to fund the eventual replacement of the technology. "It was a smart position to be put in," says Giddens, and "it makes sense that if you buy, you have to be able to replace."

While $750,000—the village's initial investment in 1995—may sound like a big chunk of change, Giddens and Brimm insist that it's reasonable for a community the size of Buffalo Grove, and they contend the benefits of the continuing investment far outweigh the cost. For fiscal year 2000, the IT budget (including the reserve account) is $423,000, a per-capita expenditure of $9.82. With a grin, Brimm notes, "I've got to believe that we're generating more that $10 in efficiency per person with everything we're doing."

6 p.m. Clang! Clang! The alarm goes off shortly after sunset, announcing a fire at the Arbor Creek Business Center on Asbury Drive. With calm dispatch, the firefighters hustle from the training room, where they were taking a refresher course on CPR, through the locker room, where they gather gear, and into the trucks. On the way to the blaze, the firefighters use laptops in the trucks to access detailed floor plans of the building as well as the location of any hazardous materials or previous fire-code violations. They can also view the location of hydrants, electrical and alarm panels, gas and water shutoffs and any important documents that will need to be saved—as well as look at the address's history to see police reports on suspected arson or if people with special needs are in the building. Within the next year the department will be able to access information about surrounding buildings so that the firefighters will know when they arrive on the scene whether extra precautions will be needed because of a chemical plant next door. All this information used to be stored in heavy three-ring binders that were kept in the fire trucks. Now that data can be updated more often and accessed more easily.

8 p.m. The lights in the rambling Village Hall have gone out for the night; Buffalo Grove goes to bed early.

Officer Sheen's shift has ended, and his reports have been filed and approved, bearing testament to another successful day of thwarting the village scofflaws. Fire Chief Allenspach and his men kick back in their La-Z-Boys at the firehouse, and over the quiet murmur of the TV they discuss the day's events and keep an ear out for the next alarm. After a three-minute commute, Giddens is winding down his day. Like many village employees, he chooses to live in Buffalo Grove, where the designation of village fits the personality—if not the size—of the community. The strength of Buffalo Grove's IT-enabled village is that "its people solve problems for themselves," says Giddens. And that's a classic American virtue.

Inspired by Buffalo Grove, Senior Writer Daintry Duffy finally trooped into her town hall recently to register her dog. She can be reached at *dduffy@darwinmag.com*.

netroots

STREET GUIDE TO
ESSENTIAL WEBSITES
AND STRATEGIES

Edited by Todd Datz

Misery Loves Companies

FAILURE BONDING **Nicholas Hall** got the idea for Startupfailures.com at his kitchen table, while reading an article about himself and three other entrepreneurs. "I could see the toll the startup process was taking on the entrepreneurs—their family life, financial well-being and health," Hall says. "There wasn't a lot out there to help support an entrepreneur going through a challenging time."

Hall knows about his subject matter—he's recovered from three startup failures in the financial services, beverage and Internet industries. In May he launched Startupfailures.com to create a community where other failed entrepreneurs could share their experiences. It boasts feature stories ("Expert Advice for Bouncing Back"), job listings, a place to ask questions of a personal coach and a discussion board with topics such as "Self-Doubt, VC Rudeness and Neglect," and "How Long Should I Go Without Getting an Expense Check?"

Hall, who is also president of the Silicon Valley Association of Software Entrepreneurs, hopes his site will encourage people to stick their necks out and launch a business. And if they fail, at least they'll have tried, and they'll know they can find support from others who've experienced the credit-card-maxing thrill of creating something from nothing. When asked about feedback he's received so far, Hall says, "There's been an overriding message of 'thank you.'" *–Todd Datz*

ILLUSTRATION BY BOB DALY

mini web guide

CRM

The term CRM gets bandied about quite freely these days. But even if you know that it means customer relationship management, you'll probably want a better grasp of the concept before sinking millions into a CRM strategy. Here are some Web resources to help.

PERSONALIZATION.COM

If your company is even thinking about engaging in e-commerce with living, breathing customers, you should bookmark this site. Yeah, it's underwritten by a vendor (Net Perceptions), but it offers a comprehensive collection of relatively hype-free thinking about personalization on the Web. The site is refreshingly devoid of typical marketing speak, thanks undoubtedly to the editorship of **Christopher Locke,** who coauthored *The Cluetrain Manifesto*, a website-turned-book that blasts companies for treating customers like so many unthinking sheep. (For more on this topic by **David Weinberger,** a fellow *Cluetrain* collaborator, see "Get Real," Page 56.)

The site is divided into four categories. The Basics includes a glossary and a good FAQ page that answers such questions as "What is personalization, anyway?" and "Are there different types of personalization?" Soapbox contains columns, vendor white papers and such guest contributions as a chapter from *The Experience*

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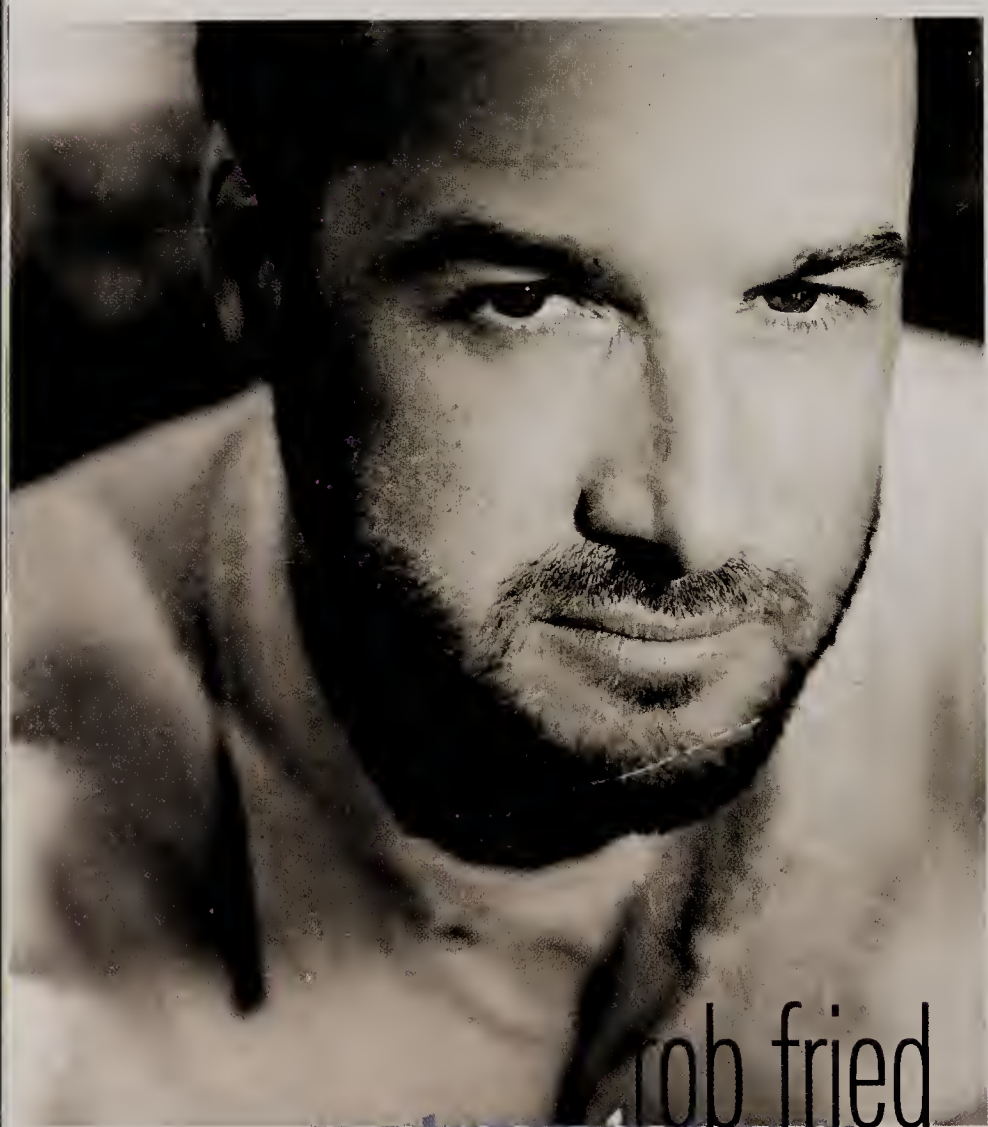
License to Kill

DOT.HOLLYWOOD What are the chances of a former Oscar winner abandoning the glitz and hype of the movie industry to launch a(nother) dot-com? Why on earth would he want to leave a business where he's actually made it, unlike the multitude of career waiters and cabbies who long for their big break?

If you're **Rob Fried,** it's because of the following: midlife crisis, desire for change and an obsession with the technology behind the Web. He's the president and CEO of WhatsHotNow.com—a Marina del Rey, Calif.-based provider of e-commerce services for entertainment, sports and lifestyle brands. In his previous life, Fried was president and CEO of Savoy Motion Pictures, and he had his own production company called Fried Films, whose credits included *Rudy* and *Godzilla*. (He won his Oscar for a 1992 short film called *Session Man*.) To fire up the creative juices that were running dry as a producer, he began a side business building promotional websites for films, including online merchandise stores. While building the *Godzilla* site, he realized that there was no company that could aggregate all of the film's merchandise—think T-shirts, coffee mugs and key rings—and provide end-to-end e-commerce.



rob fried
netrepreneur

PHOTO BY MIKA MO

The result of Fried's efforts is WhatsHotNow.com. On the B2C front, the company offers more than 300 online stores for TV shows (*The Simpsons, Frasier*), bands (Beach Boys, Grateful Dead), movies (*Austin Powers, Gladiator*) and sports teams (Boston Bruins, Cleveland Browns). Its B2B offerings include WHN Solutions, which builds the online stores, and WHN Exchange, which launched in June. The Exchange is an online marketplace for the $200 billion licensing industry. It lets licensers showcase brands, allows licensees to sell merchandise directly to retailers and bid for licenses, and allows retailers to purchase Britney Spears tchotchkes, for example, and auction excess inventory.

When asked how his 18 years in Hollywood have helped his current venture, Fried says, "Hollywood is transactional at its core. The ability to recognize a deal, structure it and close it is essential to success. That's common with Net startups as well." Old friends don't hurt either—his investors include Will Smith, Michael J. Fox and William Shatner.

–Todd Datz

web guide ...CRM

Economy by **Joseph B. Pine** and **James H. Gilmore** (Harvard Business School Press, 1999). Would-be guest authors are barred from blatant shilling: "We have just one cast-in-stone rule: Don't promote." The Resources section includes links to a list of CRM analysts, from Aberdeen Group to Zona Research. And in the forums, you can peruse threads on such topics as "Picking a partner—please share vendor experiences" or "Difference between direct marketing and one-to-one?" Unlike many fly-by-night CRM sites, this one has depth and breadth.

RETAILINDUSTRY.ABOUT.COM
For help finding truly useful information amid all the CRM propaganda, bookmark About.com's Loyalty and CRM page (which you'll find in the subject listing on the site's Retail Industry page). Prescreened articles are organized by topic (customer data mining, customer equity, customer relationships, privacy and etiquette, to name a few). You'll also find a comprehensive vendor directory with one-liners that decode the marketing gibberish into plain English to tell you what each vendor does.

WWW.RELATIONSHIP-MARKETING.COM
Also worth visiting: The CRM-Forum, run by an independent organization in the United Kingdom. Click on "documents by type" in the banner at the top of the page to get to a list of real-

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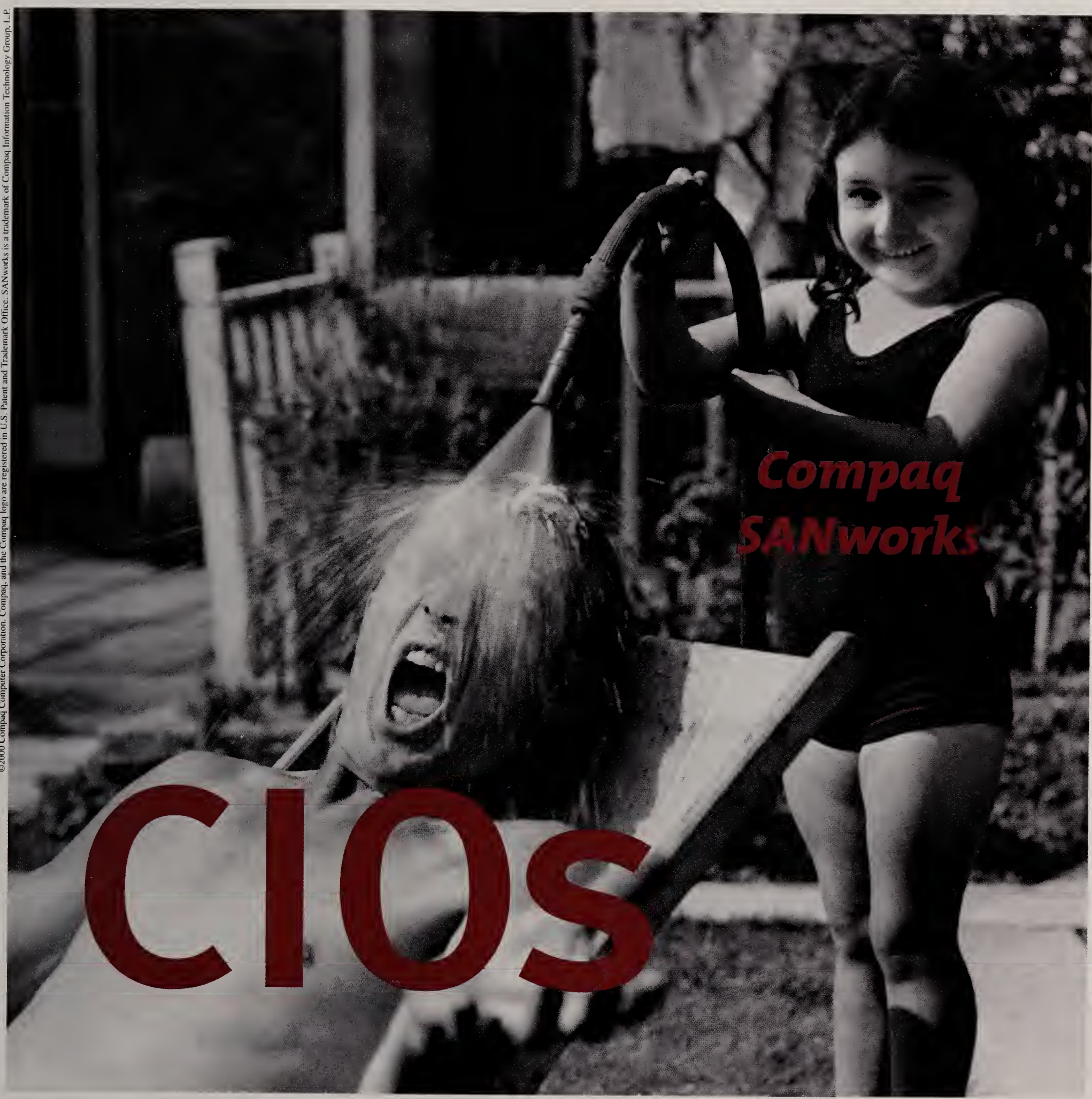

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site vs. site

Need a second opinion? With the glut of health information on the Web these days, it's pretty easy to find one—and while you're at it, to find out your body-mass index and ideal target heart rate. Here are our opinions about two sites.

RATING ★ (1-5 stars, 5=best)

WebMD

MY.WEBMD.COM
SCORE ★★★★

THE GOOD This well-organized site for consumers (part of the larger Healtheon/WebMD network) covers diseases and drugs, hosts live events and dispenses lifestyle advice from diet guru **Dr. Dean Ornish.** If you've been diagnosed with a new disease, you can join condition-specific discussion forums, sign up for newsletters or scan a listing of clinical trials. For the forgetful and health-obsessed, MyHealthRecord is a secure way to keep track of personal health information—what drugs you're taking, when your son had his last vaccination and so on—and allows you to print out medic alert cards and reports for your doctors too. CVS serves as the site's online drugstore.

THE BAD The site's content can be customized, but only to a very limited extent—users pick topics of interest and have links to those topics that appear on the site's homepage when they log in. It would be more useful to also be able to see customized health news feeds.

HealthCentral

WWW.HEALTHCENTRAL.COM
SCORE ★★★

THE GOOD MyHealthPage lets users keep track of their personal health records—and even those of their pets. It also lets users read news headlines from a broad list of chosen topics as well as sign up for newsletters. The site also has an expert Dean in residence—radio talk show host **Dr. Dean Edell**—and offers discussion forums, and a variety of quizzes and health tidbits ("See your blind spot," "Which one is a melanoma?") that might pique your health fancy. There's also an online pharmacy, forums, live events and a medical library.

THE BAD The neon-colored homepage is crammed with so many images and links that it's hard to read and hard to figure out where to click first.

ILLUSTRATION BY DAVID SHELDON

mini web guide ...CRM

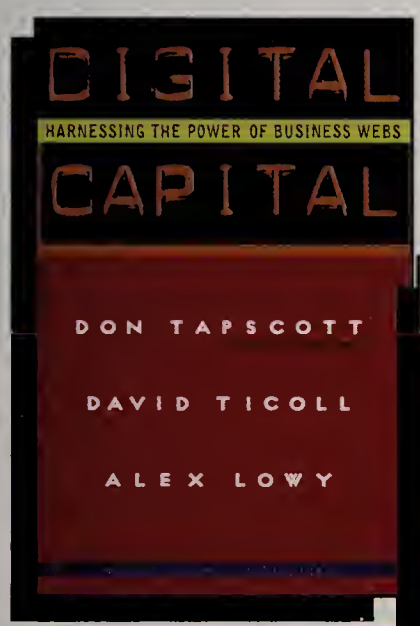
world CRM case studies. If your time is limited, you can get brief overviews to home in on the most relevant case studies. A case study of Skandia, for example, includes discussions of call centers, customer retention and sales-force automation. The site also includes presentations, articles, conference papers, academic contributions and vendor papers. A "new stuff" heading on the navigation banner takes you to abstracts of recently added material. While CRM sites tend to come and go (a CRM analyst told me that all of her once-favorite sites have disappeared within the past six months), the CRM-Forum has been around since January 1998—eons in Web time.

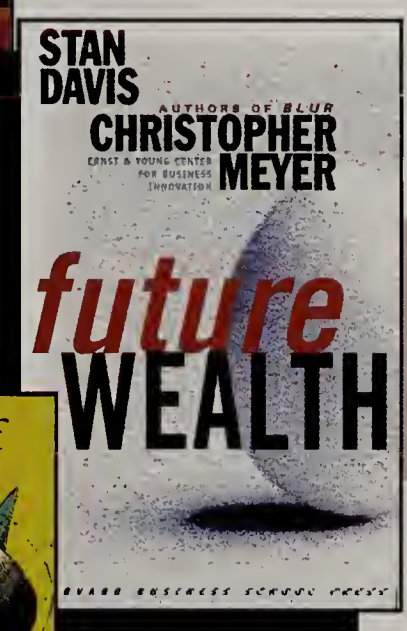
ALSO CHECK OUT...

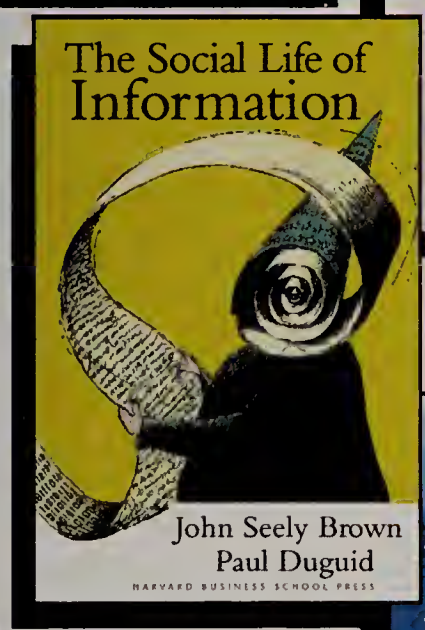
CRMGURU.COM
This site promises "Real CRM gurus. Real answers." Sure, you can pose your CRM queries to the site's eight so-called gurus and get answers. But let the surfer beware: These folks are not above promoting their consulting wares when they craft their replies. If you don't mind the marketing, you can partake of the gurus' collected wisdom by subscribing to the site's free e-mail digest of each week's most interesting questions and answers.

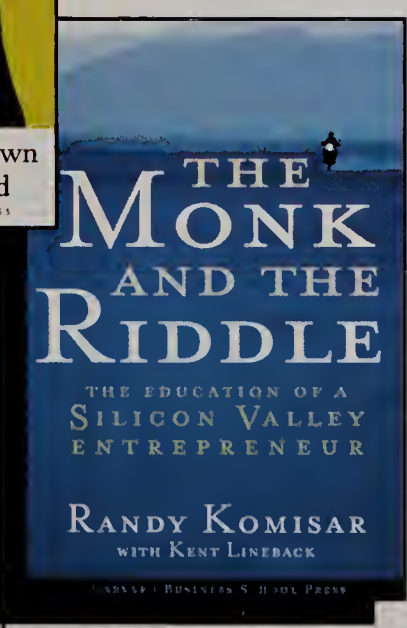
–Alice Dragoon

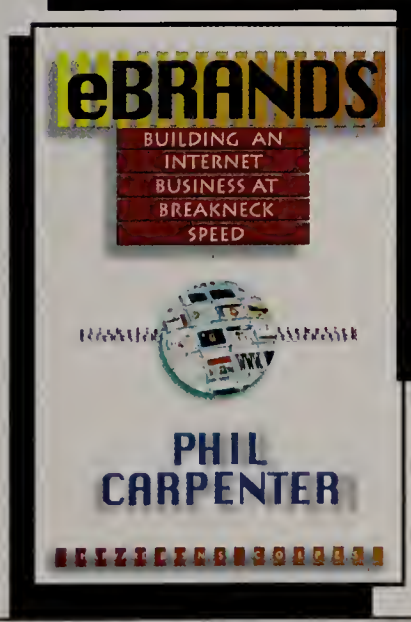
Feed your mind, ignite your business.











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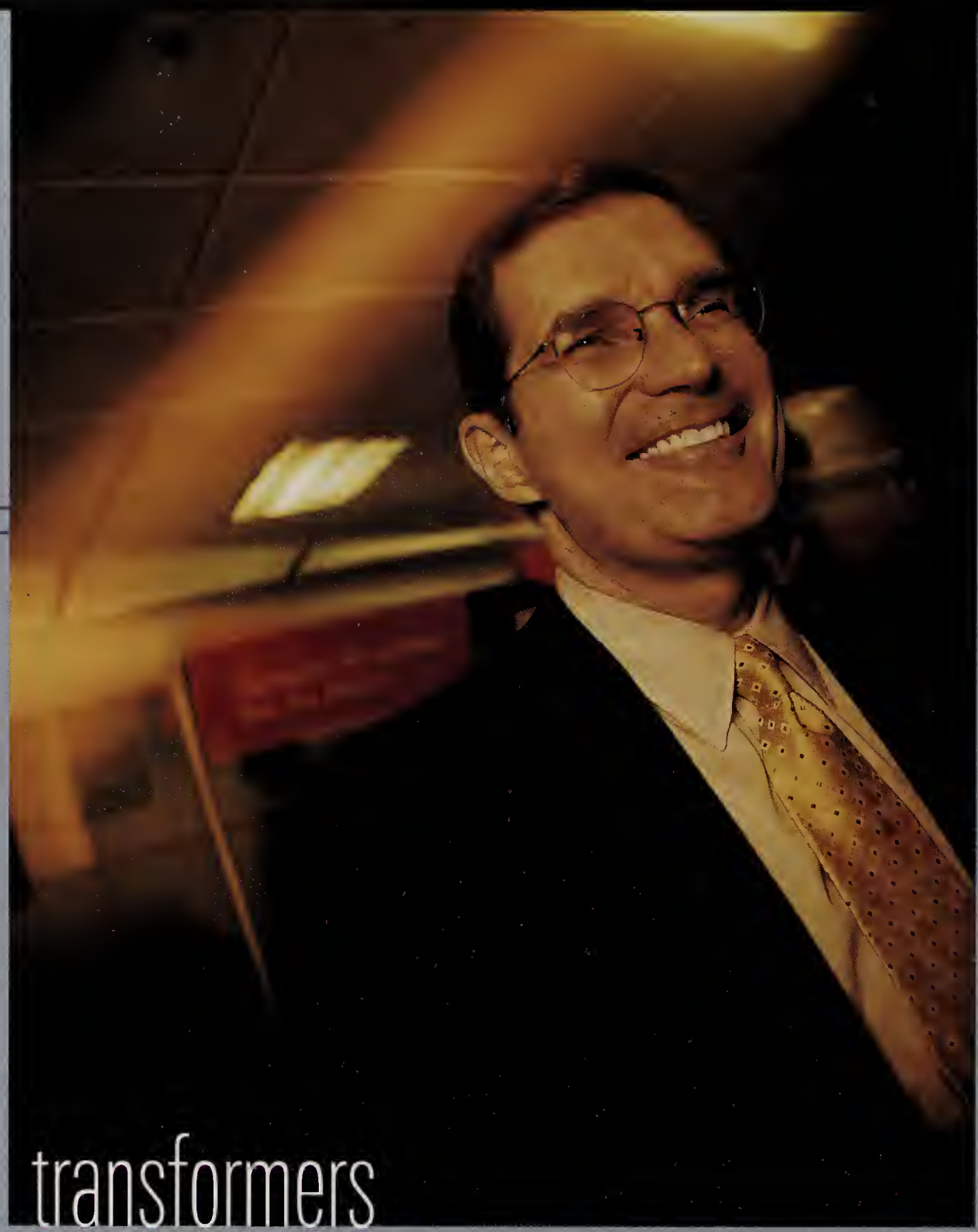

transformers

getting from bricks to clicks

Circuit City CEO Alan McCollough is all smiles when it comes to his company's website.

Circuit City

No one has figured out how to make a modem spit out a camcorder or a big-screen TV for online shoppers who need instant gratification. Until some physicist does, Circuit City's **Alan McCollough** thinks he's found the next best thing: building real-time links between its website and its brick-and-mortar stores. A CircuitCity.com customer can shop online for a camcorder, check whether a model is in stock at up to three nearby stores, reserve it at one of them and pay for it online. She can then hop in her car, drive to the store and pick it up at the front desk—and do it all, McCollough likes to boast, within a lunch hour. "It's a seamless transaction for the customer," says McCollough, president and CEO of the $12.6 billion consumer electronics chain.

CircuitCity.com also lets customers shop the old-fashioned Web way—that is, order products online and have them shipped directly to their homes from a Circuit City distribution center. (Previously, the company's website had no online shopping capability at all.) But more than half of online customers choose to pick up their purchases in a store rather than wait for them to be shipped. That doesn't surprise McCollough: "If you decide you're going to give us $1,000 for a new digital camcorder, how long do you want to wait before you start playing with it?"

While much lip service has been paid to the benefits of integrating clicks and bricks, Circuit City is one of the rare companies that actually allows customers to order online and pick up at a store. The company has a bit of a technology edge, McCollough says—a few years earlier, it rolled out a homegrown point-of-sale (POS) system that could track inventory by SKU and by store in real-time. By contrast, most retail POS systems update inventory levels only once a day. Since the company already knew where the inventory was at any given minute, its biggest challenge online was linking the website with the POS system.

The revamped CircuitCity.com launched in July 1999 and now offers more than 2,000 products. The company's execution of a true click-and-mortar strategy will no doubt make customers feel more comfortable about buying online, according to one analyst. "There's a lot of uncertainty about buying over the Web," says **Tim Washer,** vice president of NFO Interactive's media and telecom practice in Greenwich, Conn. "This reduces that uncertainty."

Although Web sales are still only a very modest slice of Circuit City's revenues, McCollough says, the company is happy with its investment: "We believe it's our obligation to sell however the customer wants to buy."

–Sari Kalin

PHOTO BY MARK LEE

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Return to Vendor

RETAIL SOFTWARE For retailers, customer returns are a necessary evil—and costly. Over $60 billion in merchandise was returned in 1997, resulting in losses (in transaction costs and merchandise liquidation) of $10 billion to $15 billion, according to industry trade groups. It's not surprising that companies are sprouting up to help alleviate retailers' pain.

One of these is The Return Exchange, an Irvine, Calif.-based startup. The company outsources return management for retailers. It provides three major services for clients. The first is Verify-1, a software application that authorizes returns by confirming that a customer actually purchased what she is returning. This helps combat fraud, which can be as much as 2 percent to 3 percent of a store's costs, according to **Mark Hilinski,** vice president of sales and marketing.

The second service, known as Restore, processes returns for retailers at a number of warehouses around the country. The third service is called Final Call Auction, an online auction for returned or overstocked merchandise that cannot be returned to the manufacturer or sold as new.

According to the company, these services can reduce the typical turnaround time on returns from 13 weeks to three weeks. For more information, check out *www.thereturnexchange.com*.

–Todd Datz

The Dunker Goes Digital

LAKER PITCHMAN You know how your eyebrows raise a little when you come across odd pairings? Take, for example, James Carville, the Democratic henchman who helped get Bill Clinton elected twice, marrying Mary Matalin, the diehard conservative who campaigned for George Bush. Now comes a marriage—well, two-year contract—between NBA MVP Shaquille O'Neal, of the league champion Los Angeles Lakers, and Digex, a high-tech company based in Beltsville, Md.

Digex is a Web- and application-hosting provider that helps companies manage their websites. How did this young buck of a company snag the biggest buck in basketball, a man who's better known for pitching consumer giants like Pepsi and Reebok? "We decided we needed a breakthrough campaign," says **Laura Heinrich,** vice president of marketing. Among the parallels she cited: They're both best in class; both highly reliable (gotta be 24/7, after all) and both equally secure (when Shaq is in the game, Laker fans can rest a little easier—except when he's at the foul line).

The Shaq campaign launched in May, primarily in print publications like *The Wall Street Journal* and *BusinessWeek*. Does Heinrich worry about how all the Laker haters in New York and Boston will respond to the ads? "I think even those who root for other teams have to recognize that he is the MVP," she says.

–Todd Datz

Supplies Chain

Percentage of buyers, sellers and distributors in the industrial supply industry that are developing and incorporating e-commerce strategies

SOURCE: HARRIS INTERACTIVE AND INDUSTRIALAMERICA, BASED ON AN E-MAIL SURVEY OF 981 INDIVIDUALS RESPONSIBLE FOR BUYING, SELLING OR DISTRIBUTING INDUSTRIAL SUPPLIES IN THE MANUFACTURING INDUSTRY

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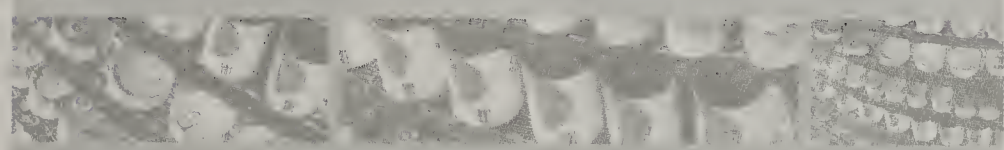
The Top 10 Trading Exchanges

Altra Energy Technologies (utilities)
Ventro Corp. (numerous industries)
CheMatch.com (chemicals)
SciQuest.com (scientific products)
PlasticsNet.com (plastics)
Neoforma.com (medical products)
e-Chemicals (chemicals)
ChemConnect (chemicals)
Instill Corp. (food services)
The National Transportation Exchange (ground transportation)



SOURCE: AMR RESEARCH, "THE REPORT ON E-COMMERCE APPLICATIONS," MARCH 2000. CRITERIA INCLUDED STRENGTH OF BUSINESS MODEL AND FUNCTIONALITY.

Surf's Up

From now until they die, plugged-in American adults will spend about 5.3 PERCENT **of their living hours online. On average, that amounts to a staggering** 23.5 MONTHS, 729 DAYS, 7,500 HOURS, 1.05 MILLION MINUTES **or** 63 MILLION SECONDS. **Women will spend less time online than men** (21 MONTHS **for women, compared with** 26.1 MONTHS **for men) but will spend more time on e-mail** (9.9 MONTHS **for women, compared with** 8.8 MONTHS **for men).**

SOURCE: CYBER DIALOGUE'S "AMERICAN INTERNET USER SURVEY," BASED ON INTERVIEWS WITH 1,000 INTERNET USERS AND 1,000 NONUSERS.

Weird and Weirder

SITES TO SURF WHEN THE BOSS ISN'T LOOKING

The Yuckiest Site on the Internet

WWW.YUCKY.COM

Feeling juvenile? This "science" site for kids has sections called Your Gross and Cool Body (belches, pimples, ear wax), Yucky Fun & Games (revolting recipes like Moldy Green Brain Surgery Salad) and Roach World. Hey, who doesn't secretly want to know where boogers come from?

The Death Clock

WWW.DEATHCLOCK.COM

Punch in your birthday and gender and up pops your predicted last day on earth. Don't visit here on days when you're down in the dumps.

Weird New Jersey

WWW.WEIRDNJ.COM

A travel guide to local legends and best-kept secrets of the Garden State. Check out the Cult of the Wavers in the Local Heroes section—Totowa resident Joe Cerce sits on his front lawn and waves to every passing car from 7 a.m. until dusk.

PHOTOGRAPHY BY PHOTONICA; ILLUSTRATION BY BOB DALY

Insuring Access

At Royal & SunAlliance Financial, leading a project to give agents better access to customer data meant mapping out—and prioritizing—the details

Thom Hopkins is vice president of business development at Royal & SunAlliance Financial in Oakville, Ontario.

No one really likes buying insurance. So the last thing you want to do is drag out the process and keep customers waiting. But at Royal & SunAlliance Financial, which sells personal insurance, business insurance and financial services all over Canada, that's exactly what our national network of independent brokers was forced to do.

A client would ask a broker a simple question like, "What is my cash value?" or "Is my policy paid up-to-date?" The broker would then contact the local sales office, which would contact the head office to find out. The sales office would relay that information to the broker, who would then respond to the client. It took a six-step process to get the client an answer. We wanted to provide sales offices and brokers better access to customer data to make it easy for independent brokers to sell and service our products.

That was the catalyst for investing in a customer relationship management system from DWL Interactive that would Web-enable our four administration systems.

To get the project off the ground, we formed a team with representatives from every department. You might not think that some of the departments would need to be involved in a technology project, but in fact they were eager to take part and were crucial to its success. We held weekly team meetings to update everyone throughout the project and set up a steering committee that included myself as project sponsor, the IT director and various department heads.

One of our biggest challenges was controlling the scope of the project. As departments saw potential for expanding the system, we had to stick to our original goals—without squelching the departments' enthusiasm—to stay on schedule. After we rolled out the first version of the system, a brainstorming session among managers to figure out what to do next yielded 44 items! So we had to prioritize based on what would give us the most impact. With a project like this, when you know your first release isn't everything you want it to be, it's hard to keep things from snaking out of control.

We rolled out the system, which we called Field-Link, to our 30 sales offices in February 1999, only a few days late and on budget. This first release reduced the client-inquiry process to four steps; no longer did sales offices need to contact the head office. Since then, we have released three more versions, the last of which included direct access for brokers. Now sales offices and brokers have secure Internet access to customer information so that brokers can answer client questions themselves.

My advice to other business executives shepherding IT projects would be this: Put together a project plan. Think about and document the details from the outset; if you don't, they'll accumulate and eventually get you. Involve IT and all users in the concept stage, project planning and at status meetings. This not only secures their buy-in but familiarizes them with the entire project. Having this big-picture perspective means they can help identify improvements for future releases. In fact, we don't think our project will ever end; we will always be adding more functionality.

Send your war stories to *headfirst@darwinmag.com.*

PHOTO BY PATRICK NICHOLS

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The Fine Print

When outsourcing any part of your Web effort, the service provider you choose is only as good as its service-level agreement. Here's how to make sure you have a good one.

Before you put your company's website in someone else's hands, make sure you've got a firm grip on the most important part of the deal: the service-level agreement.

A service-level agreement (SLA) spells out the terms of service that an outsourcer will provide. A good SLA protects the technology that is most crucial to your business and holds the outsourcer's feet to the fire if it doesn't deliver. A bad SLA can lock you in to buying a pricier level of service than you need—or can leave your systems vulnerable to neglect.

Web SLAs share many characteristics of SLAs for other types of technology outsourcing (among them, they can make good bedtime reading for insomniacs). Though it might be tempting to let your company's IT and legal departments hash out the finer details of an SLA, it would be a mistake. To negotiate the best SLA, techies and attorneys need to understand what happens businesswise if technology doesn't perform as promised. Who better to help them understand the real-world impact than someone from the business side of the house? "You want a service-level agreement that protects your business, not just your computing infrastructure," says Warren Wilson, an analyst with Summit Strategies in Boston. "It has to be written in business terms."

Here are seven ways to make sure an SLA protects your Web business and technology:

1. Ask for only what you need.

Since the Net is available 24/7, some companies believe their Web systems also need to be up and running all the time. But when outsourcing, it costs significantly more to guarantee 100 percent availability than it does to guarantee 99 percent or 98 percent, and not every company—or every application—needs it. Doug Plotkin, director of sourcing strategies at Meta Group Consulting in Westborough, Mass., advises companies to make sure the performance they request in an SLA meets a specific business need. If you feel the vendor is trying to give you a snow job, don't be too embarrassed to ask someone from your company's IT department to explain all the technological details. "It's easy for a vendor to talk a nontechnical person around in circles and make them feel intimidated," says Naomi Karten, CEO of Karten Associates, a management consulting group in Randolph, Mass.

2. Protect the important stuff.

Let's say you've outsourced the hosting of 50 servers running various Web applications. Your hoster may want to promise a level of service based on the average

ILLUSTRATION BY JONATHAN WEINER

Take me
to the network
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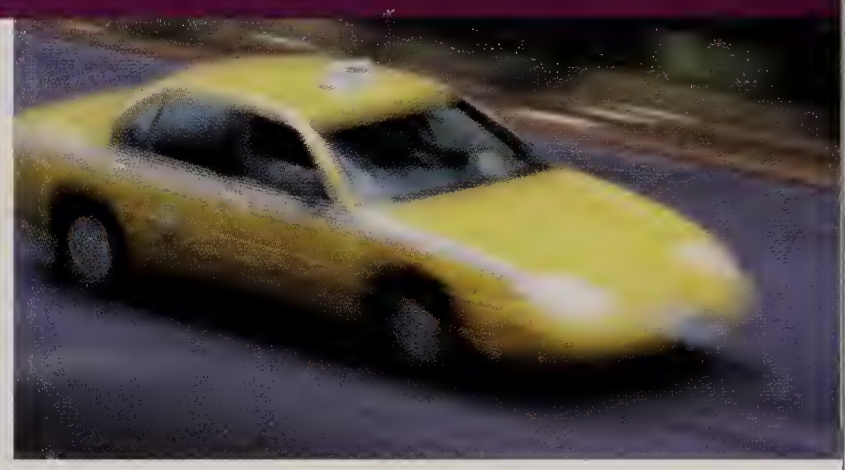

Jamie Thingelstad - Chief Technology Officer, MarketWatch.com
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* Source Media Metrix, May 2000

availability of all 50 servers, an SLA technique known as aggregation.

"That's perfectly fine unless you have one critical server that's down all the time and you can't function," Plotkin says. When servers are aggregated it typically takes a catastrophe for the average performance to fall below the specified level—and for penalties to kick in. Carving up the penalty equally to cover each individual server is also not necessarily the right move. When that critical server fails the penalty might be so small that it's cheaper for the hoster to ignore the problem than it is to fix it. Plotkin's advice is to identify critical components of the outsourcing deal—and apply penalties that get the outsourcer's attention.

Identify critical components of the outsourcing deal—and apply penalties that get the outsourcer's attention.

–Doug Plotkin, Meta Group

3. Define your terms and how you will monitor them.
When a service provider promises 98 percent uptime, make sure you ask, "98 percent of what?" Karten says an uptime promise typically does not include scheduled maintenance or acts of God. To avoid any confusion, she recommends creating a set of definitions of performance-related terms.

And don't stop there. Your Web SLA, just like any other SLA, needs to spell out how the agreement will be monitored—how service levels will be tracked, how frequently they will be reported and how often performance will be reviewed. "They're not much good unless they're monitored," says John Funk, a partner at Jones, Day, Reavis & Pogue in Dallas.

4. Cover best- and worst-case situations.
If you're outsourcing your website's customer support call center, a typical service-level agreement might specify that 90 percent of calls will be answered within 30 seconds. But if the agreement doesn't also specify the maximum length of time for answering all calls, some of your customers could be kept waiting. "The vendor could diligently answer 90 percent of the calls within 30 seconds and let the others remain on hold for minutes" without being in violation of the SLA, Plotkin says. "We've seen this happen." His advice: Spell out both the desired and worst-case levels of service.

5. Make the penalties fit the crime.
SLA penalties for poor performance are usually in the form of a rebate on the monthly service charge. That won't come close to compensating your company for lost business, especially if you're outsourcing a high-volume e-commerce site. But the penalty should get the vendor's attention to fix the problem, Funk says. Some vendors try to cap penalties at 12 to 18 months of fees. Funk fights to remove any clauses saying that this performance penalty will be the "sole and exclusive remedy of the customer."

6. Choose rewards with care.
Don't fall into the trap of agreeing to reward a service provider every time it exceeds the contracted level of service. Rewards are useful for business-related service levels—say, for being able to respond to 95 percent of website customer service calls within 30 seconds rather than the contracted 90 percent. But they are less valuable for most technology-related service levels. "What you care about when you construct service-level rewards clauses is giving aid and comfort to your end users," Plotkin says. "If the availability metric for a server is 98.5 percent and the vendor comes in at 98.6 percent, end users will not notice."

7. Demand continuous improvement.
Since technology improves rapidly over time, the service terms defined in a five- to 10-year contract can easily become out of date. For example, says Plotkin, a few years ago it would have been standard to promise at least 95 percent uptime on a server; today service providers would at a minimum guarantee 97 percent uptime. Make sure to specify that service levels will be updated periodically to match industry standards.

Have you ever been left hanging by a service provider? Let us know at *spincycle@darwinmag.com.*

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What Is KM?

I hear a lot lately about knowledge management (KM). What makes a company knowledge-based?
A knowledge-based company builds its competitive strategy on the processing of intangible, often invisible nuggets of information that cannot always be quantified or recorded. Such knowledge may include information about competitors or the understanding of a crucial market segment. It also encompasses the expertise of individual employees that, when mined, can increase a company's competitive advantage.

Are information and knowledge different?
Yes. Information is data: hard numbers about a company's profits, losses or budgets; the phone number of someone at a competing company who can be coerced out of some secrets. Take that information and season it with context and understanding, and you get knowledge. Put that knowledge where other people can get to it, like in groupware—specialized software, such as Lotus Notes, that supports communication among groups—and you are now managing the knowledge.

Where does knowledge reside in my company?
That's what makes KM such a difficult concept to put into practice. Knowledge is ubiquitous. While information can live inside myriad databases, true knowledge is more likely to lie hidden and undervalued in the minds of individual employees. And it may dwell in the relationships your colleagues have with people at other companies.

Aren't people reluctant to give up their knowledge?
Yes, and that's one of the trickiest parts of knowledge management. Before you can manage knowledge, you have to get it out of people's brains and into a central repository. And that's not easy to do if people have proprietary feelings about what they know. After all, knowledge is power, and the impulse to hoard rather than share is strong. Real KM—getting, refining and sharing information across the business—requires enormous organizational change. Only companies willing to remake their cultures around the value of sharing knowledge and insight will see the benefits.

How do I know I'm doing it right?
Quantifying a return on KM is hard to do definitively. Though a slew of companies are coming to market with software to help you try, it's still hard to put exact numbers on information organization. If careful attention to your intellectual assets has allowed you to abort a costly project before it failed, for example, you can count what you saved by not pursuing the project as KM ROI. And if there were a way to measure what you're losing by not undertaking knowledge management, then that would count as ROI, too. Companies that fail to exploit their knowledge tend to stumble on ideas and decisions with a haphazard approach rather than through a carefully organized method that takes full advantage of all available information. But happenstance is no longer enough. It's not what you have that's important; it's whether you can find it, and then what you do with it.

Is there a technology out there that you just don't get? Let us know at *learning@darwinmag.com*.

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the fittest

Edited by Todd Datz

STUFF YOU NEED
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A Sharper Image

DIGITAL CAMERAS GET GOOD

Forget waiting days for your photos to arrive by snail mail: Digital-still cameras provide instant images. And while early digitals often produced pictures fuzzier than a month-old peach, the new breed shoots sharp enough to make decent 8 x 10 enlargements.

A pair of recent models—the **Olympus C-3030 Zoom** and the **Nikon CoolPix 990**—epitomize the advances. The CoolPix 990 is the more radical of the two. A swivel splits it in the middle, letting you keep the built-in 1.8-inch LCD screen—which functions as a viewfinder, control menu display and picture preview window—in perfect view under any conditions. The C-3030 Zoom's more traditional design makes it harder to view its LCD if you try to shoot with the camera held away from your body. It is, however, more compact and a couple of ounces lighter than the CoolPix.

Style is nice, but pictures are key, and neither the 990 or C-3030 Zoom disappoint.

Both cameras provide plenty of options for tweaking: shutter speed, aperture size (how much light gets through the lens) and white balance (to keep white objects from looking gray) can all be adjusted. Each camera's macromode lets you get in close for that arty flower shot—0.8 inches with the Nikon and 8 inches for the Olympus. And the built-in optical and digital zooms let your pictures cozy up to the action while you stay a safe distance away.

Done shooting? Then download your images directly to your PC via the included USB cables; if your computer doesn't have a USB port, you can download to the serial port in your PC. (The 990 also comes with a PC serial cable. The Olympus requires a separate kit for serial connections.)

We liked both cameras so much, it was tough to choose our favorite. In the end, the Nikon's split design, closer macro capabilities and slightly lower street price won us over. Either way, you'll be the hippest exec in the office if you're showing off your grandkids on your computer.

–Chris Lindquist

nitty gritty **Rating** (1-5, 5=best)

Nikon CoolPix 990

Pros Great image quality, loads of features, super-close macromode
Cons Heavier than some models
Bottom Line If you've got the cash, you'd be hard-pressed to find a better digital camera
Street Price* $915
URL *www.nikon.com*

Olympus C-3030 Zoom

Pros Relatively small and light, sharp images, plentiful features
Cons Fixed-position LCD screen less versatile than Nikon's swivel-mounted display
Bottom Line A great high-resolution camera that competes well with the best
Street Price $985
URL *www.olympus.com*

** We calculated street price by averaging how much the cameras cost at three online merchants.*

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SCHOOL FOR SWEARERS When the company stock drops 20 points in an afternoon, a "Shoot!" "Darn!" or Homer-esque "D'oh!" doesn't convey quite the same outrage as a good 'n' salty four-letter swear. But before you shower your coworkers with a streak of head-turning expletives, Jim O'Connor, author of *Cuss Control* (Three Rivers Press, 2000) and founder of the Cuss Control Academy, suggests that you pause and consider the consequences of your potty mouth.

"In the work environment, we all have frustrations and aggravations," says O'Connor, "but it's important to remain professional and have a can-do attitude as opposed to being somebody who grumbles and swears." At the Northbrook, Ill.-based Academy, O'Connor teaches his students—often first-time parents shocked by junior's repetition of a "naughty word" or employees trying to kick the habit—that no matter how imaginative they are with their cursing, it will never earn them respect or admiration. According to O'Connor, swearing doesn't win arguments or demonstrate intelligence. In fact, it often shows that the individual is inconsiderate and lacks emotional control.

But as anyone who has ever tried to quit will tell you, swearing is a tough habit to break, especially when you work in a culture where such language is common. For that reason, the example has to be set at the top. "If the boss swears, you'll have it all the way down the chain," O'Connor says, "but if the boss says 'I don't like this kind of language,' believe me, you're not going to hear it." To help banish pernicious profanities from your vocabulary, he suggests choosing substitutes for your favorite oaths. We'd like to offer, "Gadzooks!" "Sakes alive!" and "Well, I'll be a monkey's uncle!" as excellent stand-ins.

Incidentally, O'Connor notes that because of the constant pressure of deadlines, journalists are among the worst offenders when it comes to office swearing.

But we think that's a load of #%*$.

–Daintry Duffy

FACT

In California, animals are banned from mating publicly within 1,500 feet of a tavern, school or place of worship.

SOURCE: *WWW.DUMBLAWS.COM*

Born to Run?

DISTANCE LEARNING It has been said—possibly by a nonrunner—that everyone has a marathon inside him or her somewhere. Looking for a venue to let your inner sadist out? In terms of climate and variety, the fall is one of the best times to lace up the running shoes. Here's a sample of what's out there:

New York City Marathon
Nov. 5, 2000
Catch Phrase: Where the World Comes to Run
Highlights: No shortage of graffiti to read along the way, dramatic finish in Central Park

Silicon Valley Marathon
San Jose, Calif.
Oct. 29, 2000
Catch Phrase: Version 4.0
Highlights: Possibility for oncourse recruiting, high-tech medals given to finishers

If you're just now thinking of taking your first steps, it might be wise to hold off for spring marathons, when the biggies like Boston, London and Paris come around. And if you don't quite know where to begin, check out *www.coolrunning.com, www.runnersworld.com* or *www.marathonguide.com* for training suggestions and sample workouts. But until you get a chance to log on, here are some quick tips to get you started: Do a long run once a week. Get your body used to consuming fluids—either water, Gatorade or those new-fangled sports gels—while running. Make sure you've worn the shoes and socks you plan to wear in the race on a long run to ensure that they don't create blisters the size of hockey pucks. Finally, no matter how much you're hankering for a couple of chimichangas, stay away from Mexican food the night before the big race. *–Meg Mitchell*

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Richard and Angela Turen want you to *mange* your way through Tuscany.

Machiavelli Slept Here

FOODIE VACATIONS

Richard Turen recounts the story of a CEO who went to Florence, Italy, a few years ago on a culinary tour and came back unraveled: "During one of the cooking classes, the teacher picked up a piece of pasta and whipped it on the floor, shouting that he didn't like the way it looked," recalls Turen. That incident made Turen think that perhaps there was a better way to design a vacation where food is the highlight, not the horror. (The CEO is now one of his clients.)

Turen is managing director (wife Angela is president) of Naperville, Ill.-based Churchill & Turen, a high-end travel company that specializes in vacation planning. Among its most popular trips is a culinary tour of Tuscany, which it offers about twice a year. Unlike many foodie tours, this one does not involve cooking classes (with sides of tyrannical chefs and cowering CEOs). Rather, it attempts to recreate as authentic a Tuscan experience as possible, with cooking demonstrations followed by meals that will have you hoping your husband's "classic" bolognese sauce gets lovebugged from his hard drive.

One of the tour's first stops is Gaiole in Chianti, a 60-person village that's home to "Mama Gina" and her daughter, Carla, renowned as the area's best cooks. There the two local celebrities create a number of appetizers, including thick slices of garlic bread (*fettunta*) first seared over an outdoor fire, then dipped in first-press olive oil, topped with a sprinkle of coarse salt and served with local wines (which have been produced since the 11th century). Group members then waddle over to a backyard table, where they await scads more Tuscan specialties prepared by other villagers.

Additional highlights include dining—on the day it's closed—at one of the best trattorias in Florence; enjoying homemade sausages and wines at a restaurant housed in what was once Machiavelli's home; and spending three days in the Italian Lakes region, where fresh seafood and local fishing stories abound.

The company also runs similar programs in Hong Kong, Bangkok, Singapore and France. It prides itself on offering relaxing vacations, where travelers can learn about other cultures while enjoying the fruits of the local cuisines.

Though this year's fall tour of Tuscany is booked up, spaces are available for the May and October departures in 2001. Check out *www.traveltruth.com* for more information. And make sure you pack one of those overhyped diet books for the plane ride home.

–Todd Datz

PHOTO BY BOB COSCARELLI

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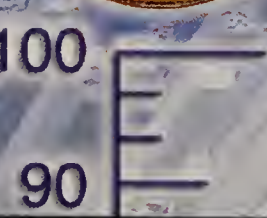

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Flying In-Fractions

PLANE RENTALS Attention companies: The corporate jet does not have to gather cobwebs in the hangar. Instead, ditch owning the jet and hop on the fractional bandwagon.

Dallas-based Bombadier Aerospace launched its fractional ownership program, called Flexjet, in 1995. Through fractional ownership businesses have the option of purchasing a one-eighth share of a jet (100 hours of flight time per year) to a half share (400 hours per year). Costs range from $773,000 for an eighth of a Learjet 31A to $19.6 million for half of a Global Express (which can travel nonstop between New York City and Tokyo).

Mike Riegel, vice president of sales and marketing for Flexjet, touts the advantages of flying flexible. He notes that smaller jets have access to more than 5,000 airports, whereas commercial aircraft are limited to 500. That helps clients get closer to their destinations while avoiding long waits in airports. And that makes for happier executives.

–Todd Datz

auto ticker...

The U.S. Department of Transportation says 93% of American children between the ages of 4 and 8 are subject to increased risk each time they get in a car because their parents fail to put them in booster seats.... In the Start-Driving-with-a-Football-Helmet Department: 70% of drivers eat in their cars, and 39% use cell phones, according to a survey by Exxon.... Scotiabank's Canadian Auto Report estimates that the sale of luxury vehicles will reach record volumes in the United States and Canada in 2000.... The five most popular vehicles on Microsoft's CarPoint website in May were: (1) Chrysler PT Cruiser (2) Honda Accord (3) Honda Civic (4) Honda Odyssey (5) Toyota Camry.... A 1999 study by J.D. Power and Associates found that side air bags in the front seats is the feature car buyers want most on their next vehicle. "Smart" frontal air bags, daytime running lights, run-flat tires and electronic traction control round out the top five.... Volkswagen recently opened Autostadt, a theme park in Wolfsburg, Germany. It boasts a Ritz-Carlton, new-car pavilions and wind tunnel demonstrations. *Fahrvergnugen,* baby....

Senior Moment

LIVIN' LARGE Don't know a CPU from a grand cru? Mystified by MHz, GBs and RAM? Help is at hand in the Web equivalent of a plain brown envelope. If you can figure out how to get yourself online, go to *www.livineasy.com* to learn everything you're supposed to know about using a computer but are too embarrassed to ask. Designed for boomers and seniors (98 percent of whose VCRs are still blinking 12:00), the site assumes users have no computer knowledge whatsoever. The glossary is refreshingly straightforward ("Monitor: This is the TV-like screen that shows what your computer is doing...") and includes some practical advice for Aunt Edna ("Remember to hold the mouse firmly. It will not break.").

If you can get past the hokey '50s diner-style graphics and homepage pearls like, "Ah yes, computer time, and the livin' is easy!" you can find articles, training in Microsoft Office, help surfing the Web and more. Or you can just tell mom and dad about it. *–Alice Dragoon*

PHOTO (MIDDLE) BY VITO ALUIA

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reviews

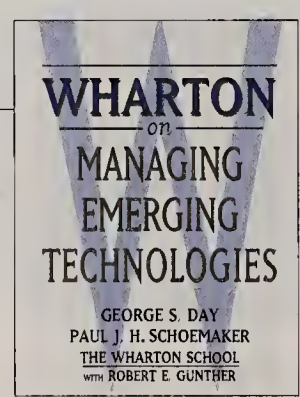
Holy Moses

MOSES: C.E.O.: Lessons in Leadership
By Robert Dilenschneider
New Millennium Press, 2000

CYNICAL READERS may view *Moses: C.E.O.* as a gimmicky spin on the issue of corporate leadership. But there's a surprising amount of value to be gleaned from Robert Dilenschneider's fifth book, if you can get past the title. The author presents choppy parables of both effective and disastrous leadership, featuring Moses (obviously) but also other political, social and corporate leaders like Jack Welch, Christopher Reeve, Golda Meir and Jackie Robinson. Each chapter focuses on leadership challenges like balancing justice with compassion, offering effective criticism and navigating hard times. Through each parable Dilenschneider draws out tips and guidelines that readers can easily take back to the office. If you're unable to overcome the frequent analogies to the biblical water-parter, this book isn't for you. But for those who'll enjoy seeing Old (Testament) leadership lessons applied to the New Economy, *Moses: C.E.O.* is a quick, accessible read.

–Daintry Duffy

Survival Skills



WHARTON ON MANAGING EMERGING TECHNOLOGIES
By George S. Day and Paul J.H. Schoemaker (with Robert E. Gunther)
John Wiley & Sons, 2000

HOW SHOULD EXECUTIVES manage today's emerging technologies, which are creating new opportunities and disrupting established businesses? If your company isn't thinking about such a fundamental issue, it may not be around tomorrow. *Wharton on Managing Emerging Technologies* is a survival kit for managers "dropped behind the lines" of these new technologies like the Internet, biotechnology and e-commerce. Based on the research of an industry-academic partnership, the book distills insights from leading business thinkers by describing the common pitfalls and potential solutions for established companies that need to learn to change with the times.

–Elaine M. Cummings

What Readers Are Reading

JARON LANIER, virtual reality pioneer
What's your favorite business book?
The Mythical Man-Month: Essays on Software Engineering, by Fred Brooks (20th anniversary edition, Addison-Wesley, 1995). It's old, but the best. Also, years ago I was supposed to have written a book, and if I ever finish it, it'll be great.

JIM TAYLOR, coauthor of *The Visionary's Handbook*
What business books really tick you off?
Books that take a short-sighted view of trends and declare the future to be here and now.... Books that say join the Internet or die. Books that proclaim the dynamic of the new economy.

ANGUS KING, governor of Maine
What are you reading now?
I'm reading a biography of J.P. Morgan that somebody gave me just before I went on vacation.... I'm in the middle of an Inspector Morse mystery. I love Inspector Morse.

The Darwin Five

1. **The Tipping Point**
How Little Things Can Make a Big Difference
by Malcolm Gladwell
(Little, Brown and Co., 2000)

2. **Irrational Exuberance**
by Robert J. Shiller
(Princeton University Press, 2000)

3. **Built to Last**
Successful Habits of Visionary Companies
by James C. Collins and Jerry I. Porras
(HarperCollins, 1994)

4. **Why We Buy**
The Science of Shopping
by Paco Underhill
(Simon & Schuster, 1999)

5. **First, Break All the Rules**
What the World's Greatest Managers Do Differently
by Marcus Buckingham and Curt Coffman
(Simon & Schuster, 1999)

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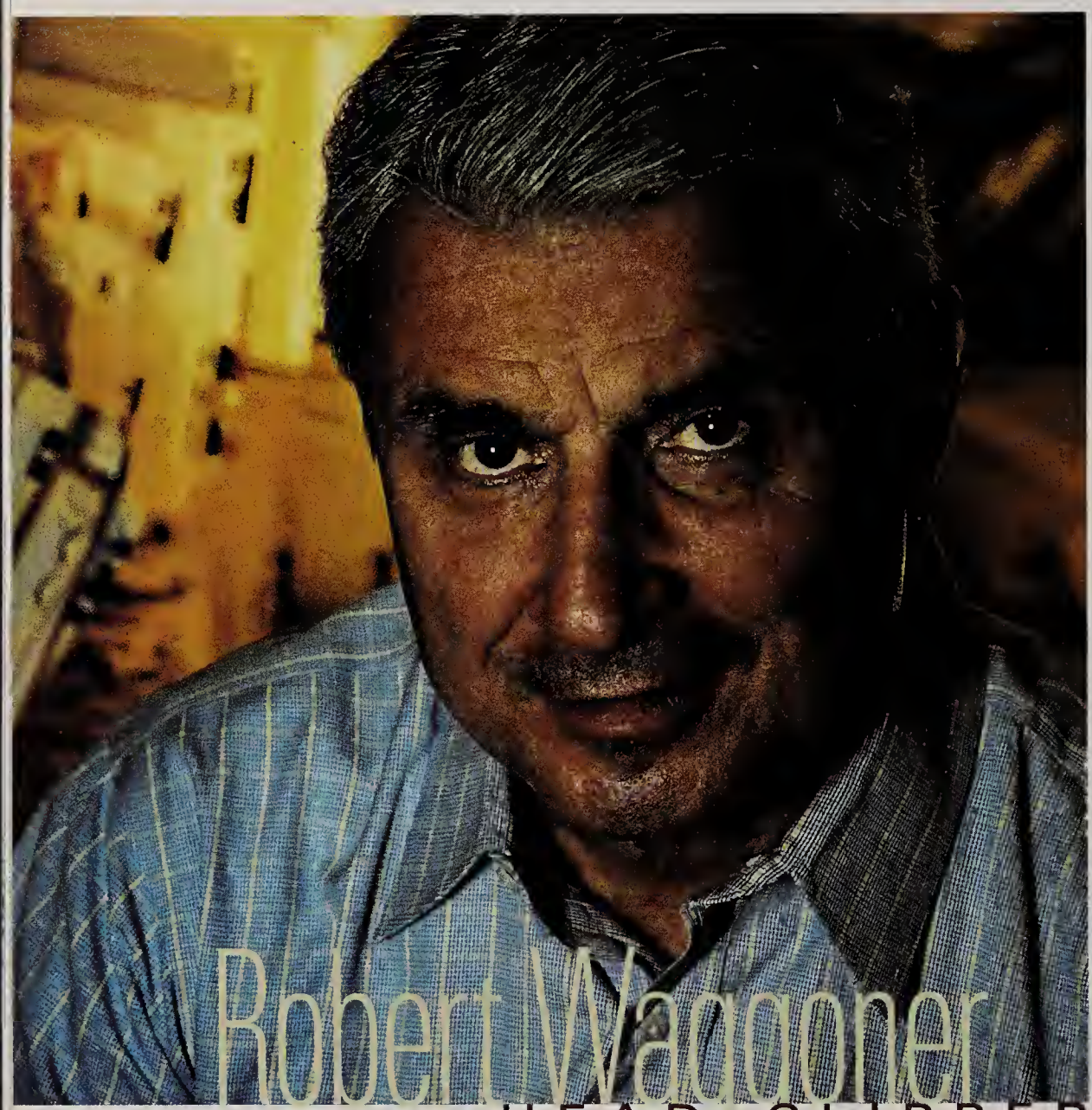

Robert Waggoner
HEAD CLIPPER

Waggoner is president and CEO of Burrelle's Information Services. His employees read every publication in the United States and provide press clips to clients. The company also provides online and video monitoring services.

DARWIN **How can a 115-year-old press-clip business still be alive and clipping today?**
WAGGONER By trying to keep up with the times and providing first-class customer service. That includes adding new products and services and updating our services with technology.

How do you use technology in your business?
We have a very large database of our orders—the things our clients want. We also use scanning-and-searching technology. Our plan with technology is to deliver all of our products on the Web.

[However], the basic reading operation we do for our clipping service still involves our readers making decisions on what clients want. To give good quality service, we have to have human intervention.

What's the most interesting thing on your schedule this summer?
The birth of my next child. I'll be one of the oldest fathers in my Harvard classes [undergrad and business school].

About how much time each day do you spend on the Web?
Very little. I trust the editors of *The New York Times, The Wall Street Journal* and the major business publications to do a good job of selecting things [for me to read]. I don't like to read things on a screen.

If you could trade e-mails with any three historical figures, who would they be?
Abraham Lincoln, George Washington and Johann Sebastian Bach. I hosted a 300th-birthday party in 1985 for Bach. Anthony Newley played a recital.

If you had one piece of advice to give readers, what would it be?
I'll be 64 years old this summer. I'd say never stop learning. Keep your mind active. Life should be fun, and learning is one of the most fun things there is. The biggest failure of alumni associations has been not keeping in touch with alumni to encourage lifelong learning. *–Todd Datz*

PHOTO BY GIORGIO PALMISANO

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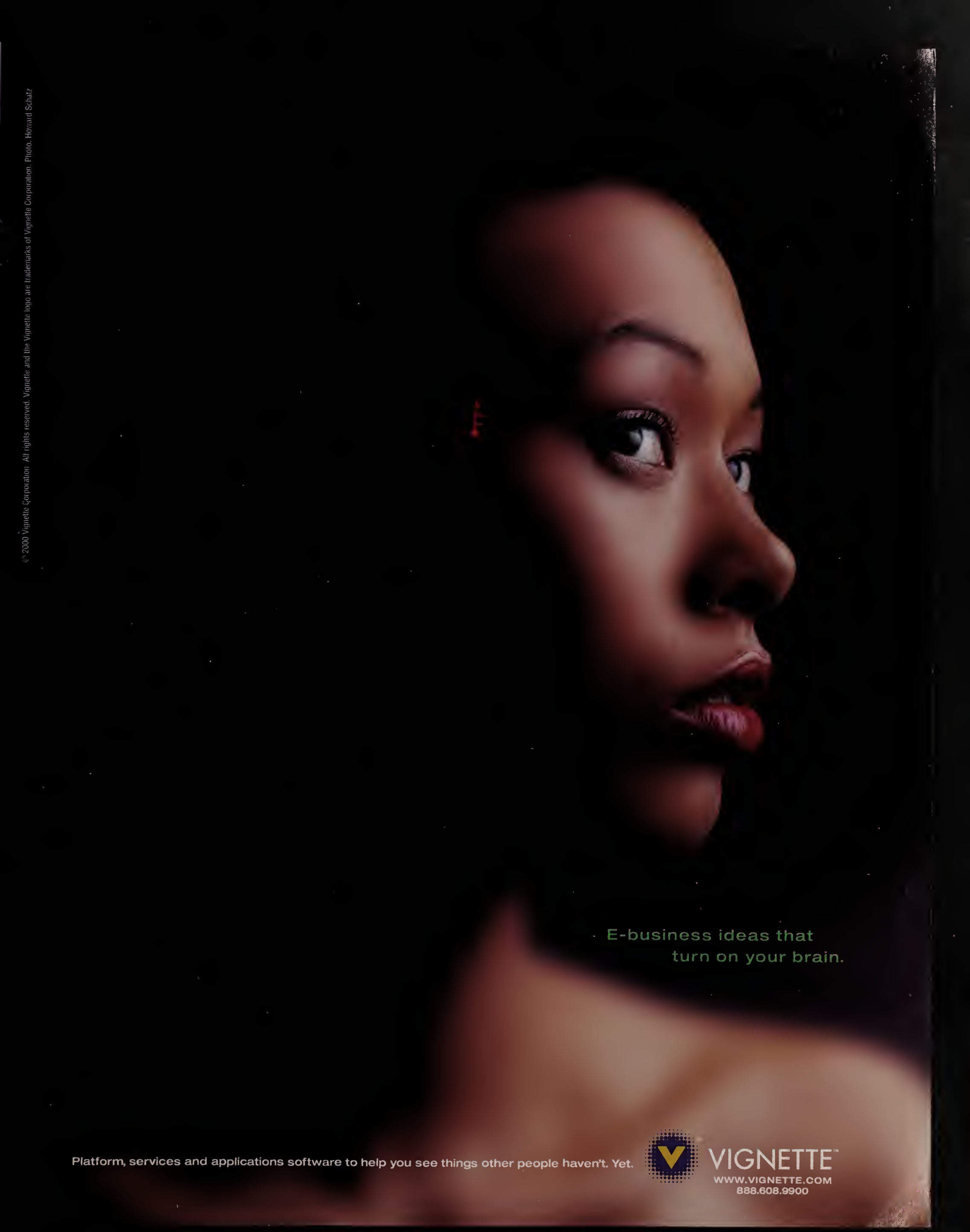

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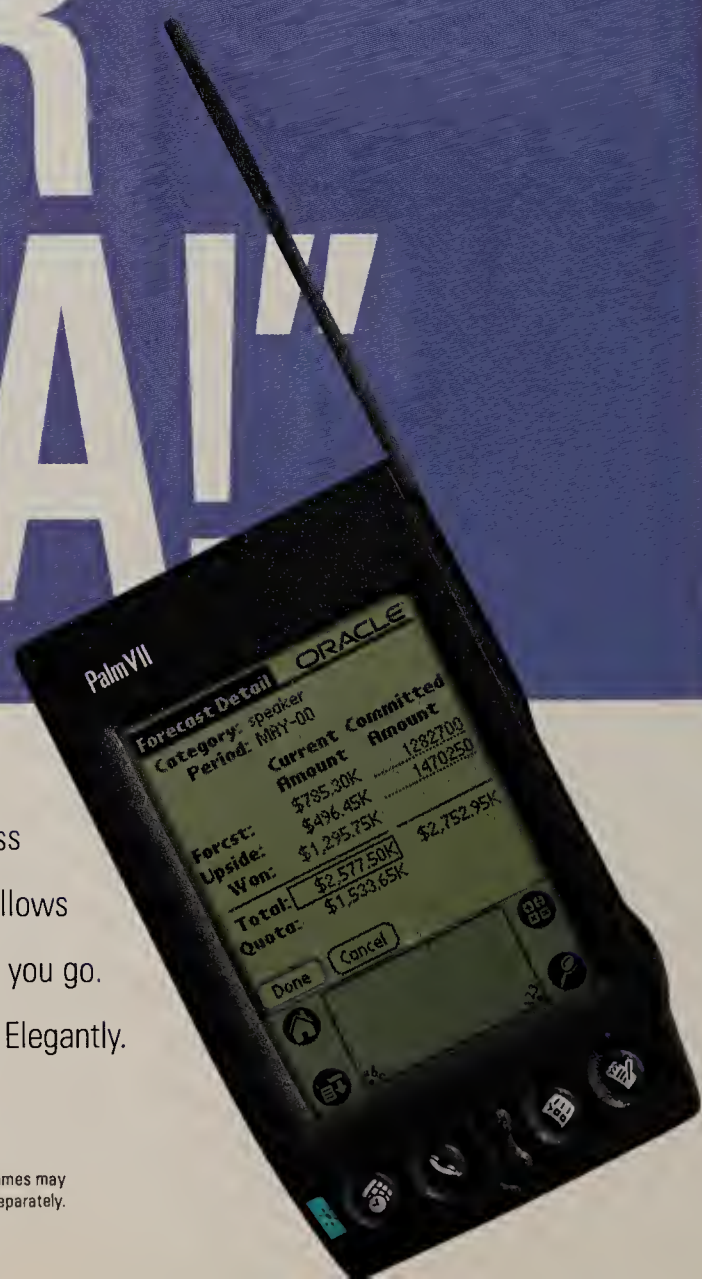

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